VHS Video Movie-Maker

System Model-VR9240AV01

Consists of

VR9143AV01/V80081BK01

VHS

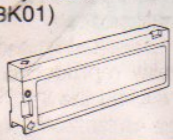
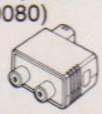
Operating Instructions

MAGNAVOX

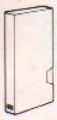
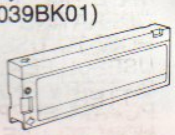
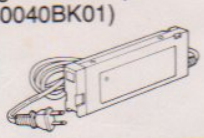
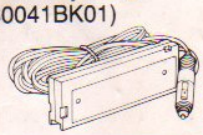
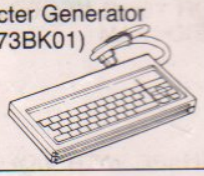
VQTS1365
IB52100001

ACCESSORIES

Accessories packed with your VHS Movie-Maker

1 pc. AC Adaptor (V80081BK01)	1 pc. Battery Pack (V80039BK01) 	1 pc. Remote Control (7044270081)	1 pc. Audio/Video Output Adaptor (7044270080) 
1 pc. VHF Connecting Cable (4613990215)	1 pc. 300onm-75ohm Transformer (3693200005)	1 pc. Audio/Video Cable (4613990207)	1 pc. Earphone (5899100002)
1 pc. Shoulder Strap (4091700003)	1 pc. CR2032 Battery (5399000040)		

Optional Accessories

1/2" Video Cassette Tape T-120 (V80008BK01) 	AC Adaptor (V80081BK01)	Battery Pack (V80039BK01) 	Plug-In AC Adaptor (V80040BK01) 
Car Battery Cord (V80041BK01) 	Character Generator (V80073BK01) 	Remote Control (V80072BK01)	System Carrying Case (AR8219SL01)

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

CAUTION:
TO PREVENT FIRE OR SHOCK HAZARD AND ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSORIES ONLY.

Your VHS Movie-Maker is designed to record and playback in SP mode only. The VHS Movie-Maker will not perform normal playback for programs pre-recorded in LP or SLP mode.

TO PREVENT DAMAGE TO THE EXPENSIVE PICK-UP DEVICE, DO NOT AIM THE LENS DIRECTLY AT THE SUN, OR BRIGHT LIGHTS, EVEN WHEN THE POWER IS OFF. THIS ACTION COULD PERMANENTLY DAMAGE THE PICK-UP DEVICE.

Only use those tapes with the VHS mark. It is recommended that only cassette tapes that have been tested and inspected for use in 2, 4, 6, and 8 hour VCR machines be used.

The serial number of these products may be found on the bottom of the VHS Movie-Maker and on the surface of the AC Adaptor. No others have the same serial number as yours. You should record the number and other vital information here and retain this book as a permanent record of your purchase to aid identification in case of theft.

Date of Purchase _____
Dealer Purchased From _____
Dealer Address _____
Dealer Phone No. _____
Model No. VR9143AV01/V80081BK01
Serial No. _____

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The features the VHS Movie-Maker offers are designed to help you make video recordings even if you have never used a movie camera before. This means that except for making a selection or two all of the recording conditions will be taken care of automatically.
The VHS Movie-Maker is not just limited to automatic functions, the features needed for highest quality reproduction may be set manually as well. With some experience, you will find the VHS Movie-Maker especially enjoyable to use in the widest range of recording conditions.
This manual will introduce you to the VHS Movie-Maker. You can begin with it now to learn the basics about handling your VHS Movie-Maker. When you get more familiar with the use of the features, take a closer look at the professional hints that come later in the book, once you have acquired these few techniques you will enjoy using them often with the VHS Movie-Maker.
Thank you for purchasing the VHS Movie-Maker.

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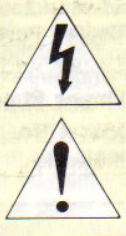
CAUTION: To prevent electric shock do not use this (polarized) plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

ATTENTION: Afin de prévenir tout risque des chocs électriques, ne pas utiliser de rallonge avec cette fiche polarisée. De plus, ne pas brancher cette fiche dans quelque prise de courant que ce soit si les lames ne peuvent être insérées à fond sans laisser de partie découverte.

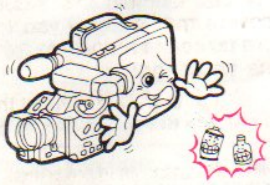
CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK)
NO USER-SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL

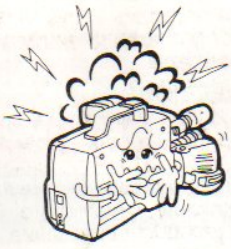


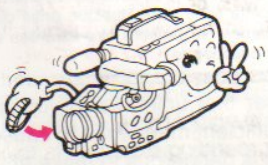
This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any inside part of this unit.

This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.

IMPORTANT SAFEGUARDS







1. READ AND RETAIN THE SAFETY AND OPERATING INSTRUCTIONS
   Before operating this product read the operating instructions and then retain them to make full use of the safeguards and features incorporated in this Video product.
2. FOLLOW THE INSTRUCTIONS, AND BE SURE TO HEED ALL WARNINGS-on the equipment and in the manual, for easy maintenance, confident operation and trouble free service of this Video product.
3. WATER AND MOISTURE-Do not use this Video product if it gets wet or anywhere near water, for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement or near a swimming pool, and the like.
4. DISCONNECT BATTERY FROM THIS VIDEO PRODUCT AND UNPLUG VIDEO ACCESSORIES FROM THE WALL OUTLET BEFORE CLEANING
   Do not use liquid cleaners, strong or abrasive detergents, or aerosol cleaners. Use a damp cloth for cleaning.
5. THIS VIDEO PRODUCT SHOULD BE OPERATED ONLY FROM THE TYPE OF POWER SOURCE INDICATED ON THE MARKING LABEL. If you are not sure of the type of power supply to your home, consult your appliance dealer or local power company. For Video products intended to operate from battery power, or other sources, refer to the operating instructions.
6. THIS VIDEO PRODUCT IS EQUIPPED WITH A POLARIZED ALTERNATING-CURRENT LINE PLUG (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If the plug does not fit fully into the socket, try reversing it. If the plug still does not fit fully into the socket, you may find that a proper outlet is needed to meet today's Electrical Standards. Do not defeat the safety purpose of the polarized plug. An electrician will replace your outlet safely.
7. WHEN YOU USE A POWER SUPPLY CORD
   Route the power cord so that it will not be subject to walking traffic or abuse, particularly at plug-ins, convenience receptacles, or cord exit points from the unit. Where an extension is needed, use a polarized cord. HAZARDOUS FRAYED CORDS OR DAMAGED PLUGS SHOULD BE REPLACED BY A QUALIFIED SERVICE TECHNICIAN. OVERLOADED WALL OUTLETS AND EXTENSION CORDS ARE DANGEROUS RISKS OF FIRE OR ELECTRICAL SHOCK.
8. TURN OFF THIS VIDEO PRODUCT WHEN NOT BEING USED OR DURING A LIGHTNING STORM, disconnect from any power source to avoid damage due to lightning and power surges or when it is left unattended or unused for long periods.
9. DO NOT LEAVE THIS VIDEO PRODUCT IN DIRECT SUNLIGHT
   When the viewfinder eyepiece or optical Video lens is exposed to direct sunlight it works as a magnifying glass. The concentrated sunlight can cause damage to internal parts of the product.
   DO NOT AIM THIS VIDEO PRODUCT DIRECTLY AT THE SUN OR OTHER BRIGHT OBJECT-direct exposure to a strong light source could permanently damage the pick-up device, whether it is turned on or off.
10. TO PROTECT THE LENS AND KEEP IT CLEAN-always place the Video product lens cap back on the lens when the product is not in use. Do not touch the surface of the lens with your hand. Use a commercial optical lens solution and optical lens paper when cleaning the lens. Improper cleaning can scratch the lens coating.
11. DO NOT PLACE THIS VIDEO PRODUCT ON AN UNSTABLE SUPPORT
    This Video product could fall causing serious unintended injury or damage. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the Video product. Any mounting of the unit should follow the manufacturer's instructions and should use a mounting accessory recommended by the manufacturer. Do not allow unnecessary movement (shaking and striking) of this video unit when storing and handling to avoid damage to the sensitive pick-up device.
12. USE RECOMMENDED ATTACHMENTS
    Do not use attachments not recommended by the Video product manufacturer as they may be hazardous.

13. BE SURE THE VENTILATION SLOTS ARE NOT BLOCKED AND AVOID SUDDEN CHANGES IN TEMPERATURE
The ventilation slots in the body of the Video product prevent abnormal increases of internal temperature. The openings must never be blocked by placing the Video product on a bed, sofa, rug, or other similar soft surface. This Video product should not be placed in a custom-built enclosure unless proper ventilation is provided or the manufacturer's instructions have been adhered to. This Video product should never be placed near or over a radiator or heat register. Also, when moving the product through sudden changes of temperature from a cold place to a warm place, moisture may form on the tape or inside the unit, causing the DEW Indicator on the EVF to flash and the Power to shut off automatically.

14. SEPARATE THE UNIT FROM ANY INTERFERENCE CAUSING APPLIANCES. Placing the unit directly above or below your TV set may cause interference. Keep all magnets away from electronic equipment.

15. AVOID OBJECT AND LIQUID ENTRY-Never push objects of any kind into this Video product through the openings as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the Video product.

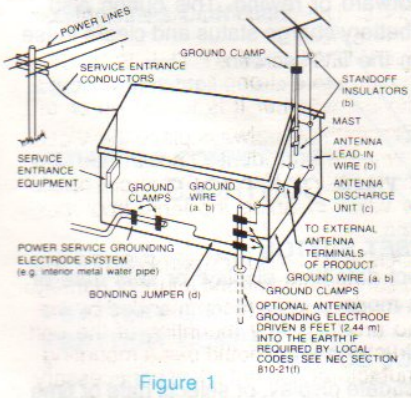
16. DO NOT ATTEMPT TO SERVICE, repair, or disassemble this Video product yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. There are no user serviceable parts inside. Refer all servicing to qualified service personnel.

17. DAMAGE REQUIRING SERVICE-Disconnect the power supply from this Video product and refer servicing to qualified service personnel under the following conditions:
    a) When the power-supply cord or plug of AC Adaptor is damaged.
    b) If liquid has been spilled, or objects have fallen into the Video product or the unit has been exposed to rain or water.
    c) If the Video product does not operate normally. Be sure to follow instructions as an improper adjustment of other controls not in the operating instructions may result in damage and will often require extensive work by a qualified technician to restore the Video product to its normal operation.
    d) If the Video product has been dropped or the external case has been damaged or when there is a distinct change in performance, this indicates a need for qualified service.

18. REPLACEMENT PARTS-When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

19. SAFETY CHECK-Upon completion of any service or repairs to this Video product, ask the service technician to perform safety checks to determine that the Video product is in proper operating condition.

20. INSURE SAFE ANTENNA AND CABLE CONNECTIONS
If an outside antenna or cable system is connected to the equipment, be sure the antenna or cable system is grounded so as to provide some protection against built up static charges and voltage surges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure 1 for items a-d below.


POWER LINES
GROUND CLAMP
SERVICE ENTRANCE CONDUCTORS
STANDOFF INSULATORS (b)
MAST
ANTENNA LEAD-IN WIRE (b)
ANTENNA DISCHARGE UNIT (c)
SERVICE ENTRANCE EQUIPMENT
GROUND CLAMPS
GROUND WIRE (a, b)
TO EXTERNAL ANTENNA TERMINALS OF PRODUCT
GROUND WIRE (a, b)
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (e.g. interior metal water pipe)
BONDING JUMPER (d)
OPTIONAL ANTENNA GROUNDING ELECTRODE DRIVEN 8 FEET (2.44 m) INTO THE EARTH IF REQUIRED BY LOCAL CODES SEE NEC SECTION 810-21(f)
Figure 1

a. Use No.10 AWG (5.3 mm²) copper, No.8 AWG (8.4 mm²) aluminum, No. 17 AWG (1.0 mm²) copper-clad steel or bronze wire, or larger, as ground wire.
b. Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4 feet (1.22 m) to 6 feet (1.83 m) apart.
c. Mount antenna discharge unit as close as possible to where lead-in enters house.
d. Use jumper wire not smaller than No. 6 AWG (13.3 mm²) copper, or the equivalent, when a separate antenna-grounding electrode is used. See NEC Section 810-21(j).

21. ELIMINATE ANTENNA PROXIMITY TO HIGH VOLTAGE POWER SOURCES, OR CHANCE OF ACCIDENTAL CONTACT BY INSTALLER
An outside antenna system should be located where it will never be reached by power lines, electric light or power circuits and where it will never contact these power sources if it falls. Installer should use extreme care to avoid possible fatal contact by touching power lines, circuits or other power sources when installing outside antenna.

FEATURES

Your new Magnavox VHS Movie-Maker is a compact, light weight unit. Actually a combination of VHS Video Camera, Recorder and Player, your VHS Movie-Maker operates steadily for up to 2 hours 40 min. using T160 tape. Because it uses standard VHS tape, the VHS Movie-Maker format is directly compatible with any other VHS VCR. The features detailed below will show how you can enjoy the convenience and performance in the design of your VHS Movie-Maker.

HQ (High Quality) System

This VHS Movie-Maker is equipped with the HQ System to provide excellent video picture, and is compatible with existing VHS equipment.

CCD Image Sensor

At the heart of your VHS Movie-Maker is a revolutionary new solid state image sensor, the CCD (Charged Coupled Device). The CCD is a durable, vibration resistant chip which improves your color image and conveniently needs no warm up time. Your VHS Movie-Maker is always ready when you are for that perfect picture with no after-image or electronic distortion.

Fade In/Out Feature Page 24

With the press of a button you can fade into the picture and at the end of the action gently fade out for a truly professional result.

Record Review Page 24

While in record/pause mode you may use the Electronic View Finder (EVF) and the Record Review feature to check the last few seconds of tape just recorded.

Power Zoom and Macro Function Pages 22, 39

The smooth power zoom will bring the subject 6 times closer, or with the Macro function you can move into the miniature, right up to 1 inch from the lens, for a sharp full screen image.

Automatic/Manual Focusing Page 21

The Auto focus system works via an infrared light beam aimed at objects positioned before the center of the lens. When the Focus switch is set to AUTO, the camera will focus the picture for you automatically. Set the Focus Switch to MANUAL and while you press the focus button the Camera will automatically focus. Release button for full manual adjustment of lens using the Lens Focus Ring.

Automatic White Balance

Automatic indoor/outdoor light compensation and the Automatic White Balance will continuously adjust for the optimum color balance.

High Speed Shutter Page 23

You can record fast action with the High Speed Shutter Switch ON. Later a still mode playback (or slow mode with a regular VHS VCR) will reveal the fine points of any motion up to 1/1000th of a second, with no blurred screen image.

Automatic Iris

With the Automatic Iris feature, the light level for the pick-up device is continuously maintained for proper picture brightness and contrast.

Record A TV Program Page 29

The VHS Movie-Maker enables you to record a TV program through the AC Adaptor if the TV has VIDEO OUT & AUDIO OUT Terminals.

Playback Video Page 15

Immediately view your recordings in the Electronic View Finder (EVF) using any of the special effect playback functions: STILL, FF search, REW search, along with the usual PLAYBACK of tapes you may have just recorded.

Audio Dubbing Page 30

With the Audio Dub feature, you can substitute your comments or a mood with music on a previously recorded tape at any segment.

Video Dubbing Page 31

With the Video Dub feature, you can edit your video tapes by replacing existing video segments of the tape with a new video segment. The advanced rotary flying erase head technology of the VHS Movie-Maker results in exceptionally clean editing of recorded material.

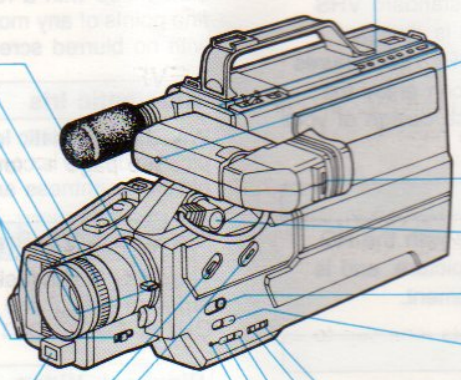
Indicators On Electronic Viewfinder Pages 17, 18

The easily adjustable viewfinder has a 2/3 inch black and white TV screen showing the exact camera lens view under every condition. The EVF display indicators show the Recording, Date/Time, Tape Counter, Memory-on, High Speed Shutter status and Battery Strength. And as a reminder, Tape, Battery and Dew warnings may flash on the EVF screen.

3 Way Power Supply Pages 25, 26

Since your VHS Movie-Maker is a compact camera, recorder and playback system, you can move your video production anywhere using one of the three available power supplies.
INDOORS – The AC Adaptor allows you to plug-in the VHS Movie-Maker, charge batteries, or hook up to a monitor or regular TV.
OUTDOORS – With the Battery Pack connected to your VHS Movie-Maker you have approximately 2 hours of continuous use. You can also minimize power consumption with the special STANDBY mode.
IN YOUR VEHICLE – The VHS Movie-Maker simply plugs into the cigarette lighter with the Car Battery Cord (optional).

FRONT VIEW



- FUNCTION CONTROL PANEL (P. 9)
- TALLY LIGHT

LENS
- ZOOM LEVER
- LENS FOCUS RING
- LENS HOOD
- MACRO BUTTON (ON ZOOM LEVER)
- DISTANCE DETECTION WINDOWS
- FOCUS SWITCH (WITH PUSH TO FOCUS BUTTON)

EVF
- ELECTRONIC VIEWFINDER (EVF)
- EVF CONNECTOR

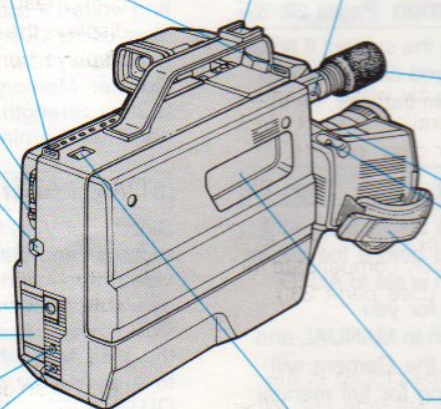
- RECORD REVIEW BUTTON
- HIGH SPEED SHUTTER

IMAGE ADJUSTMENT
- WHITE BALANCE DETECTION WINDOW
- BACKLIGHT BUTTON
- FADE BUTTON

COUNTER
- RESET BUTTON
- DISPLAY/MEMORY BUTTON

DATE AND TIME CONTROLS
- DATE/TIME/SET BUTTON
- DATE/SELECT BUTTON
- CLOCK BUTTON

REAR VIEW



- STRAP ATTACHMENT RING
- TRACKING CONTROL
- EDIT SWITCH
- ADAPTOR CONNECTOR

BATTERY IN/OUT
- BATTERY EJECT BUTTON
- BATTERY COMPARTMENT

- REMOTE JACK
- EARPHONE JACK

- ACCESSORY MOUNT
- EXTERNAL MICROPHONE JACK
- MICROPHONE

FOR RECORDING
- POWER ZOOM SWITCH
- RECORD/PAUSE BUTTON

- GRIP BELT

CASSETTE IN/OUT
- CASSETTE COMPARTMENT
- EJECT BUTTON

FRONT VIEW

LENS

- **ZOOM LEVER**
  Use this lever to manual
  subject (or Power Zoo
- **LENS FOCUS RING**
  Rotate this ring to manu
  the Focus switch is in
- **LENS HOOD**
  Shields camera lens ar
  protect lens.
- **MACRO BUTTON (ON**
  Used to unlock Zoom
  far left Macro position fo
  close as one inch from
- **DISTANCE DETECTIO**
  These two windows ar
  camera distance for th
- **FOCUS SWITCH**
  AUTO Position - Slide
  constant Auto Focusing
  MANUAL position - Sli
  and while you press th
  automatically focus. Re
  Lens Focus Ring by ha

IMAGE ADJUSTME

- **WHITE BALANCE DE**
  Detects the color temp
  For proper white balan
  the window with your
- **BACKLIGHT BUTTON**
  Press this button while
  the lens opening will au
  high contrast light con
- **FADE BUTTON**
  When this button is pr
  viewfinder image and
  the button is released t
  fade in. (See page 24

FRONT VIEW

LENS

- **ZOOM LEVER**
  Use this lever to manually Zoom in and out on your subject (or Power Zoom Switch page 8).
- **LENS FOCUS RING**
  Rotate this ring to manually focus the picture when the Focus switch is in the MANUAL position.
- **LENS HOOD**
  Shields camera lens and accepts lens cap to protect lens.
- **MACRO BUTTON (ON ZOOM LEVER)**
  Used to unlock Zoom Lever so it moves into the far left Macro position for close-up photography as close as one inch from the lens.
- **DISTANCE DETECTION WINDOWS**
  These two windows are used to detect subject to camera distance for the automatic focus feature.
- **FOCUS SWITCH**
  AUTO Position - Slide this switch to AUTO for constant Auto Focusing.
  MANUAL position - Slide this switch to MANUAL and while you press the switch, the picture will automatically focus. Release the switch to adjust Lens Focus Ring by hand.

IMAGE ADJUSTMENT

- **WHITE BALANCE DETECTION WINDOW**
  Detects the color temperature for white balance. For proper white balance operation, do not block the window with your hand or other objects.
- **BACKLIGHT BUTTON**
  Press this button while recording your subject, and the lens opening will automatically compensate for high contrast light conditions. (See page 23.)
- **FADE BUTTON**
  When this button is pressed the picture in the viewfinder image and on tape will fade out. When the button is released the picture will automatically fade in. (See page 24.)
- **TALLY LIGHT**
  The red tally light flash alerts those being recorded that recording is in progress.

EVF

- **ELECTRONIC VIEWFINDER (EVF)**
  See page 17 for indicators.
- **EVF CONNECTOR**
  For connecting the Electronic Viewfinder or the optional Character Generator.
- **RECORD REVIEW BUTTON**
  Press this button to playback the last few seconds of your recording. (See page 24.)
- **HIGH SPEED SHUTTER SWITCH**
  For a clear image replay of high speed motion in still mode (or slow mode with a regular VHS VCR). (See page 23 for use.)

COUNTER

- **RESET BUTTON**
  Resets tape counter to "0000".
- **DISPLAY/MEMORY BUTTON**
  When this button is in the "M" position, the tape will stop when the Tape Counter reaches "0000" during fast forward or rewind. This button also displays the battery charge status and clears these displays from the EVF screen.

DATE AND TIME CONTROLS

- **DATE/TIME/SET BUTTON**
  Used to select date/time display, or sets date or time in clock mode.
- **DATE/SELECT BUTTON**
  Used to select date display, or selects date or time in clock mode.
- **CLOCK BUTTON**
  Press with soft tip to select or leave clock mode.

REAR VIEW

- **STRAP ATTACH**
- **TRACKING CON**
  If visual interferen
  picture, use this c
  picture.
  (See page 15.)
- **EDIT SWITCH**
  When dubbing ta
  as the Playing VH
  VHS Movie-Make
  the quality of the
- **ADAPTOR CONN**

BATTERY IN/O

- **BATTERY EJEC**
  To eject the Batte
  then down to rele
  release of Batter
- **BATTERY COMP**
  Insert a battery p
  Adaptor or option
  power supply.
- **REMOTE JACK**
  Connect the Wire
- **EARPHONE JAC**
  Accessory earph
  monitor sound wh
  recordings.

REAR VIEW

- **STRAP ATTACHMENT RING**

- **TRACKING CONTROL**
  If visual interference appears in the playback picture, use this control to obtain the clearest picture.
  (See page 15.)

- **EDIT SWITCH**
  When dubbing tapes using this VHS Movie-Maker as the Playing VHS Movie-Maker or Recording VHS Movie-Maker, place this switch ON to improve the quality of the dubbed tape.

- **ADAPTOR CONNECTOR**

BATTERY IN/OUT

- **BATTERY EJECT BUTTON**
  To eject the Battery Pack, press this button in and then down to release safety, then press further for release of Battery Pack. (See page 12 for use.)

- **BATTERY COMPARTMENT**
  Insert a battery pack, the optional Plug-In AC Adaptor or optional Car Battery Cord to use as the power supply.

- **REMOTE JACK**
  Connect the Wired Remote Control here.

- **EARPHONE JACK**
  Accessory earphone (supplied) plugs in here to monitor sound while recording or while playing back recordings.

- **ACCESSORY MOUNT**
  Convenient mounting facility for the optional Character Generator or lights.

- **EXTERNAL MICROPHONE JACK**
  You may connect an external microphone to permit audio pick-up closer to the subject. The built in microphone is automatically disconnected when a compatible microphone is plugged-in.

- **MICROPHONE**

FOR RECORDING

- **POWER ZOOM SWITCH**
  This switch allows you to "zoom-in" with Telephoto (or T) or "zoom-out" with Wide Angle (or W) for the picture you are recording. (See page 22.)

- **RECORD/PAUSE BUTTON**
  Press this button to start or pause camera recording.

- **GRIP BELT**
  This belt can be adjusted to the size of your hand.

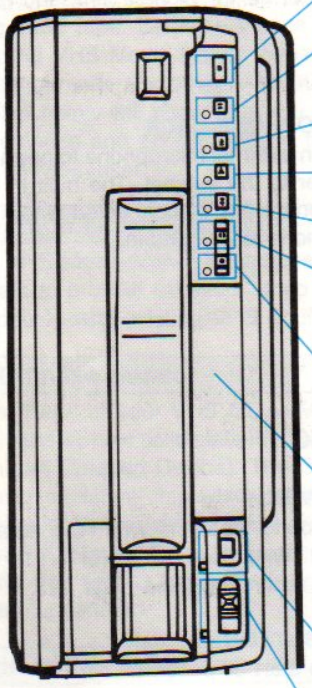
CASSETTE IN/OUT

- **CASSETTE COMPARTMENT**

- **EJECT BUTTON**
  Press this button to insert or to remove the cassette.

DESCRIPTION OF CONTROLS (CONTINUED)

FUNCTION CONTROL PANEL



STOP BUTTON

PAUSE/STILL BUTTON/INDICATOR
Use this button to pause in play or VCR recording mode.

FAST FORWARD/SEARCH BUTTON/INDICATOR

PLAY BUTTON/INDICATOR

REWIND/SEARCH BUTTON/INDICATOR

DUB BUTTON/INDICATOR
Use this button when doing either Audio or Video Dubbing with the VHS Movie-Maker. (See pages 30 and 31.)

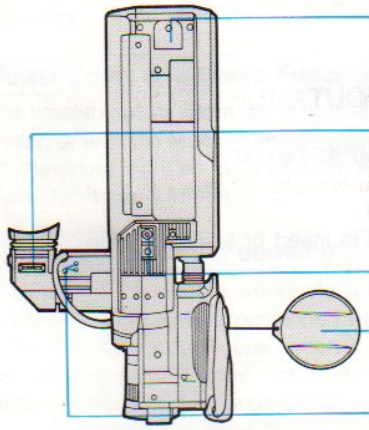
RECORD BUTTON/INDICATOR
For TV recording with the Video In and Audio In terminals on the AC adaptor hold this button in and press PLAY Button at the same time.

VCR/CAMERA SELECTOR DOOR
Slide this door completely to the VCR position to automatically select VCR and Stop mode.
Slide this door to the CAMERA position to activate MOVIE and Record/Pause mode.

STANDBY BUTTON/INDICATOR
When this button is pressed the VHS Movie-Maker is ready to record, but uses a minimum amount of battery power. (See page 14.)

POWER SWITCH/INDICATOR
Turns power on and off.

UNDERSIDE



BATTERY COMPARTMENT
Insert the battery into this holder. The battery must be inserted in order for the date and time to be kept in memory. (See page 19.)

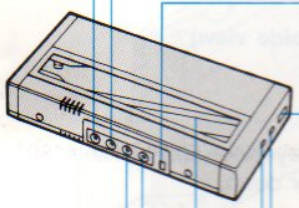
VISION ADJUSTMENT LEVER
Adjust to your eyesight to assure good focus. Be sure to adjust when shooting for the first time or after another person has used the VHS Movie-Maker.

TRIPOD MOUNTING HOLE

LENS CAP
Can be attached to hand grip with built in clip.

BRIGHTNESS CONTROL/FOCUS CONTROL
These controls adjust the brightness and focus of the viewfinder picture.
NOTE: These controls have been set at the factory. It is not necessary to adjust these controls under normal circumstances. But, should it become necessary it is recommended that you use a plastic screwdriver and make the adjustment with caution so as not to damage the miniature controls.

AC ADAPTOR



VIDEO OUTPUT CONNECTOR
For connection to a video input connector on a monitor TV or another VCR.

AUDIO OUTPUT CONNECTOR
For connection to an audio input connector on a monitor TV, another VCR or an audio tape recorder.

CHANNEL 3/4 SWITCH
Set to channel 3 or 4, whichever is not used for TV broadcast in your area or provides the best picture during playback.

INPUT SIGNAL SELECTOR
While in VCR mode, the recorded sound will be:
CAMERA: The sound from the microphone.
LINE: The sound from the Audio Input Connector.
While in CAMERA mode, the sound from the microphone is automatically selected for recording, regardless of selector position.

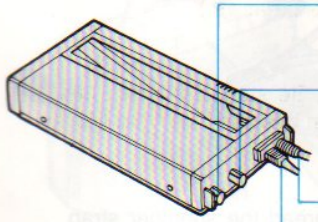
CHARGING INDICATOR LAMP
Lights while the Battery is charging. After charging, this light will go off.

POWER INDICATOR LAMP
This Indicator lights up when the AC Power Plug of the AC Adaptor is connected to an AC outlet.

BATTERY CHARGING COMPARTMENT
For charging a battery pack.

AUDIO INPUT CONNECTOR
For connection from another VCR, TV or other Audio Source's output connector.

VIDEO INPUT CONNECTOR
For connection from a video output connector on another VCR, or a TV to record a TV program.



VHF ANTENNA INPUT TERMINAL
Connect the VHF antenna or cable signal to this terminal. (See page 27.)

VHF ANTENNA OUTPUT TERMINAL
Connect this terminal to the VHF antenna terminal on the TV using VHF Connecting Cable (supplied).

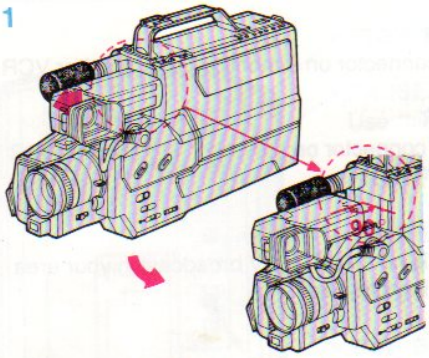
ADAPTOR CABLE

AC POWER CORD

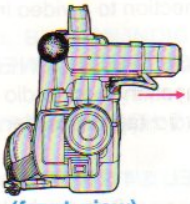
ADJUSTMENTS FOR EASY HANDLING

HOW TO ADJUST THE ELECTRONIC VIEWFINDER

1

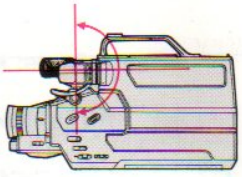


2



(front view)

3



(side view)

1. The Electronic Viewfinder will slide forward on its mount and swing to the left to lock into a right-angled viewing position. (For special uses, remove the EVF by sliding it completely forward and pressing the recessed spring plate on the underside of EVF, then pull the EVF off of the mount.)

2. In the locked position you may extend or contract the EVF for comfortable left or right eye viewing.

3. The eyepiece may be tilted 180° up or down.

To store

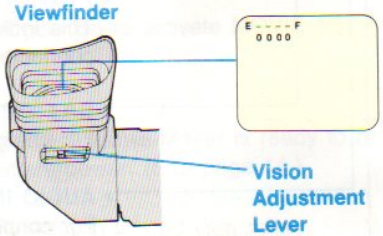
- In the locked viewing position extend the EVF out to clear the Microphone Mount. Then swing the EVF forward in line with the handle.
- Fully contract the EVF back to its compact position.

VISION ADJUSTMENT LEVER

1

1. When the VHS Movie-Maker Power is ON, make contact with the EVF eyepiece as shown here.

2

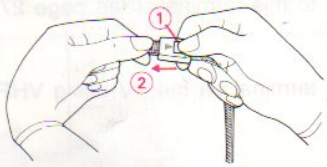


2. Locate the lever on the underside of eyepiece and move it to adjust for clear view of the EVF screen display.

HOW TO USE THE SHOULDER STRAP

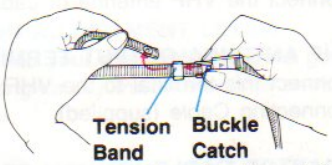
The shoulder strap makes it easier to carry the VHS Movie-Maker.
Attach the shoulder strap to the VHS Movie-Maker as illustrated below.

1



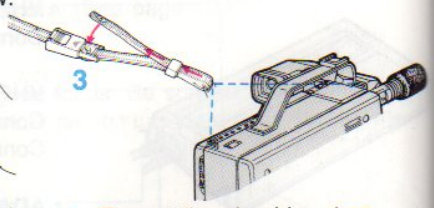
1. Press release button. Pull cover back along the strap to expose buckle catch.

2

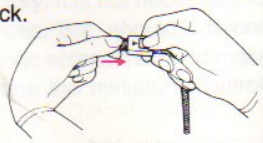


2. Unhook strap from buckle catch and then slide strap end out of its tension band.

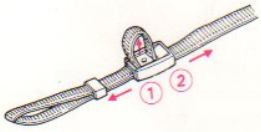
3



3. Thread the shoulder strap through the Strap Attachment Ring on the camera. Then thread the strap end back through its Tension Band and hook it on the buckle catch. Slide cover back over buckle to lock.



HOW TO ADJUST THE LENGTH OF SHOULDER STRAP

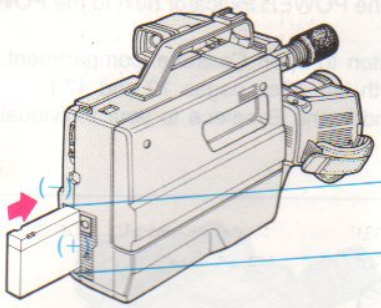


Pull a loop of the strap loose from its buckle, and then pull the strap firmly through its Tension Band or Buckle to adjust its length.

TO INSERT OR REMOVE A BATTERY

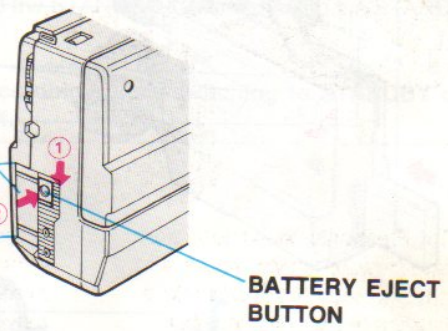
Be sure to fully charge the Battery Pack before operation.

Insert Battery



■ Insert the Battery Pack into the Battery Compartment.

Remove Battery



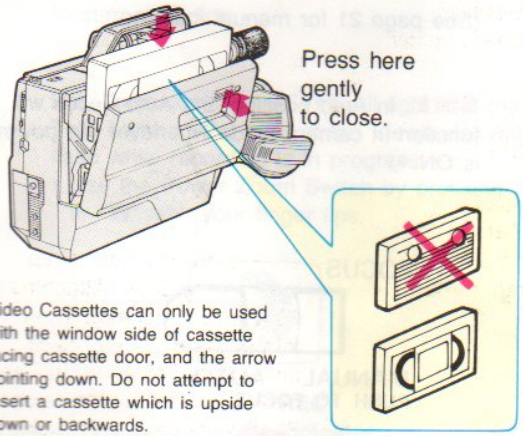
■ Press in and down to release the safety, then press in further to eject the Battery Pack.

- Be sure that the POWER Switch is set to "OFF" before ejecting Battery Pack.

TO INSERT OR REMOVE A CASSETTE

The VHS Movie-Maker may be ON or OFF when you insert or remove a cassette.

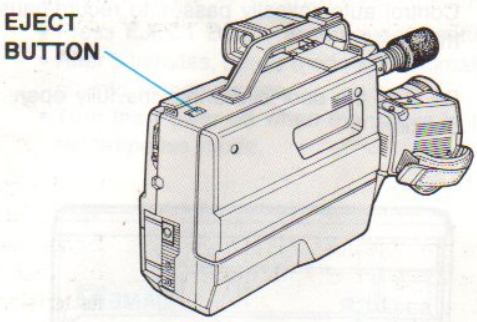
Insert Cassette



Video Cassettes can only be used with the window side of cassette facing cassette door, and the arrow pointing down. Do not attempt to insert a cassette which is upside down or backwards.

1. Press EJECT Button, cassette compartment opens.
2. Insert cassette and close cassette door.

Remove Cassette

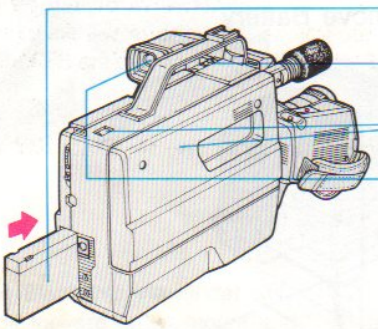


1. Press EJECT Button.
2. Remove a cassette and close cassette door.

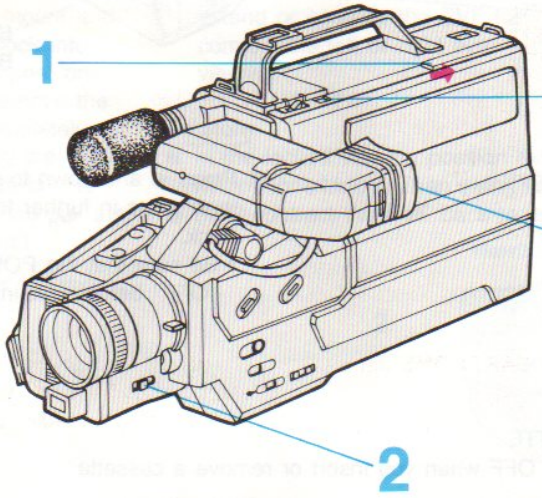
CAMERA RECORDING

Begin the simple trial here to become familiar with the operation of your VHS Movie-Maker.

Preparation

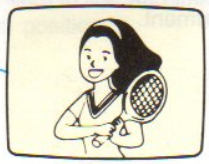


- Insert the Battery Pack into the Battery Compartment. (See page 12.)
- Turn on Power. (The POWER Indicator next to the POWER Switch will light.)
- Press EJECT Button to open Cassette Compartment. Insert cassette with tab. (See pages 12 and 47.)
- Adjust the Viewfinder and Eyepiece to your individual viewing comfort. (See page 11.)



STANDBY Button
(See top of the next page.)

EVF

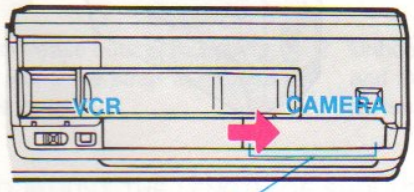


When the VHS Movie is turned on, the picture appears.

1 **Slide the VCR/CAMERA Selector Door to CAMERA position.**

Control automatically passes to record/pause mode.

Be sure the door clicks into the fully open position.

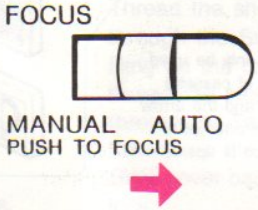


REC, PLAY and PAUSE/STILL Indicators will light.

2 **Set the Focus Switch to the AUTO position.**

(See page 21 for manual focusing.)

NOTE: In Auto position, the Auto Focus will function in camera mode whenever the power is ON.

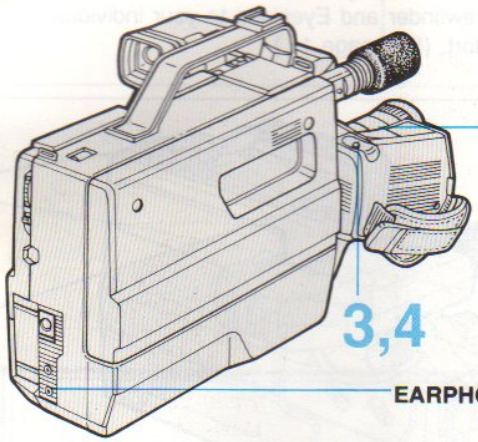


STANDBY BUTTON

Set the STANDBY Button to STANDBY to conserve battery power during long pauses between recordings. The picture will disappear from the viewfinder and the STANDBY Indicator next to the STANDBY Button will light.

NOTE:

Always pause the recording before switching to STANDBY or turning the Power off.



Connect the earphone (supplied) to the earphone jack for monitoring the sound track as it is being recorded or played back.

3 **Press the red RECORD/PAUSE Button**

to start recording.

REC Indicator (in the EVF) will light and the Tally Light on the front of the Viewfinder will flash while recording is in progress.

- Use the Power Zoom Switch by pressing "T" or "W" with your finger tips.

REC Indicator

When the tape reaches its end, the VHS Movie-Maker will go into stop mode.

4 **Press the RECORD/PAUSE Button to place the unit in record/pause mode.**

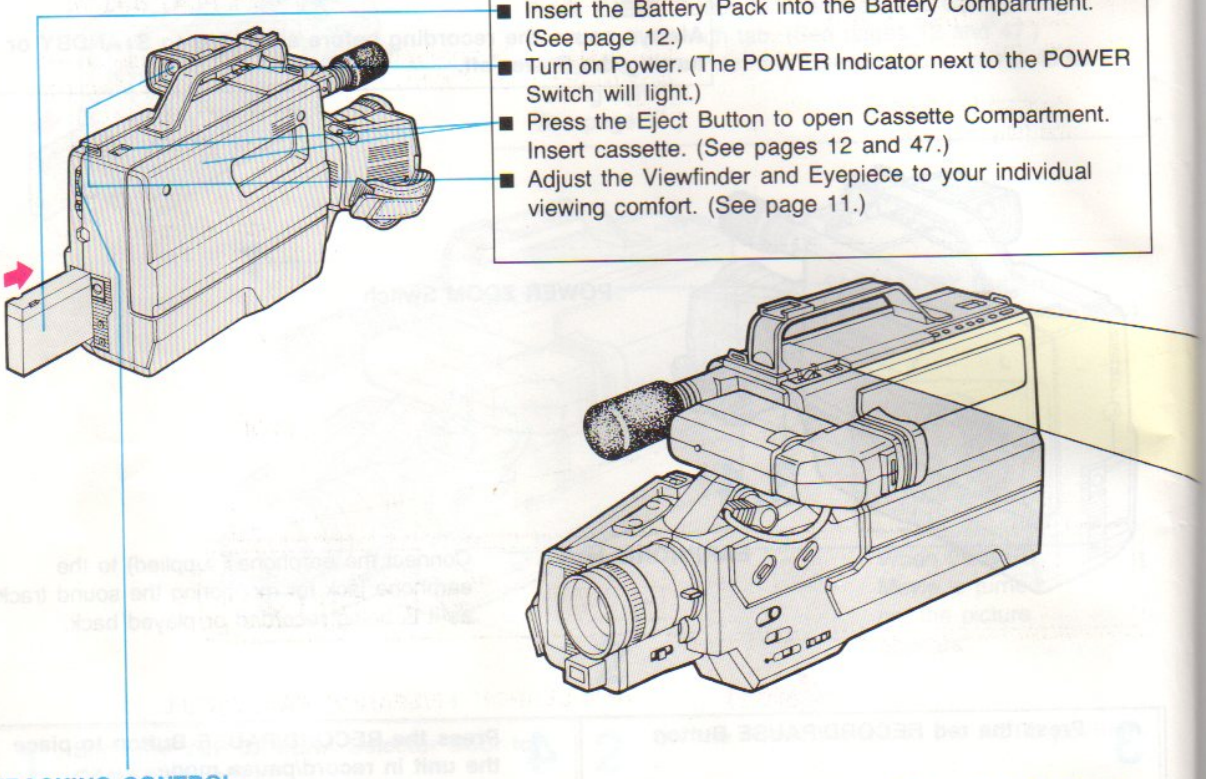
- Press EJECT Button to remove cassette.
- After 5 minutes, pause mode will automatically go into standby mode.
- Turn the Power off when the unit is in the record/pause mode.

PLAYBACK

Now, you will want to see a playback of your first recording. You can play back your VHS Movie-Maker recordings immediately on the VHS Movie-Maker Electronic Viewfinder by following the steps given below. You may also play back your VHS Movie-Maker recordings directly to a monitor or TV. (See page 27 for TV connection.)

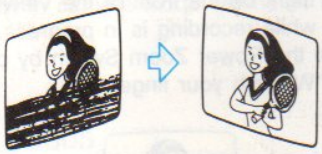
Preparation

- Insert the Battery Pack into the Battery Compartment. (See page 12.)
- Turn on Power. (The POWER Indicator next to the POWER Switch will light.)
- Press the Eject Button to open Cassette Compartment. Insert cassette. (See pages 12 and 47.)
- Adjust the Viewfinder and Eyepiece to your individual viewing comfort. (See page 11.)



TRACKING CONTROL

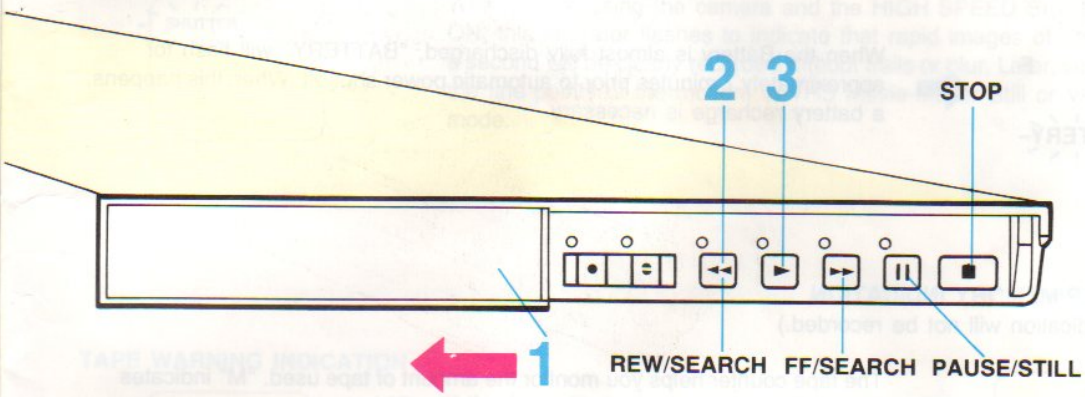
For playing back tapes recorded on your VHS Movie-Maker, the TRACKING CONTROL is normally left in the detent (center) position.
If there is noise in the picture or when playing back a prerecorded tape or tape recorded on other machines, adjust this control until noise has moved out of the picture as shown.



NOTE:

- After recording or playback is finished, make a habit of fully rewinding the tape by pressing the REWIND Button before EJECT.
- VHS Movie-Maker playback for pre-recorded LP or SLP programs may be completely snowy.
- When the tape reaches its end during playback, or fast forward, the tape will rewind automatically.
- To return to CAMERA mode from any function in the VCR mode, slide the VCR/CAMERA Selector Door to CAMERA position, then press the Record/Pause Button to record.
- If the prevention tab has been removed from the cassette, "TAPE" in EVF and REC Indicator next to the Record Button will flash in CAMERA mode, and record mode will not function.

1	2	3
Slide the VCR/CAMERA Selector Door to VCR position. Be sure the door clicks into the fully open position.	**Rewind tape** if necessary to beginning of tape by pressing REWIND Button.	**Press PLAY Button.** Recorded picture should appear on the Viewfinder after a few seconds. (PLAY Indicator lights up.) ■ Press STOP Button to stop playback.



SPECIAL EFFECTS PLAYBACK OPERATIONS

TO RAPIDLY LOCATE A PARTICULAR SEGMENT

■ Hold down the desired SEARCH Button.

REW/SEARCH or FF/SEARCH

SEARCH SPEED

about 3 times normal speed.

- Special effects playback can be activated during playback.
- During search playback, horizontal noise bars will appear on the TV and audio will not be heard. This is normal.

TO VIEW A STILL PICTURE

■ Press PAUSE/STILL Button.

PAUSE/STILL

■ Press again to release the tape from pause/still mode.

- In order to protect the tape and Video heads the VHS Movie-Maker modes will automatically revert as follows:
  - STILL $\xrightarrow{\text{IN 5MIN}}$ STOP
  - STOP $\xrightarrow{\text{IN 5MIN}}$ POWER OFF
    -with Battery, Plug-In AC Adaptor power or Car Battery

INFORMATION ON ELECTRONIC VIEWFINDER INDICATORS

The Electronic Viewfinder is a miniature monitor that displays in black and white what you are recording as you will see it in playback, and you can view this recording immediately in playback on this display. The EVF display also enables you to check the VHS Movie-Maker recording conditions and set them before you begin recording.

BATTERY REMAINING INDICATION

(NOTE: This indication will not be recorded.)

When the Battery is fully charged, the indicator appears as shown.

E - - - F

As Battery charge is consumed, the indicator changes as shown.

E - - F

E - F

When the Battery is almost fully discharged, "BATTERY" will flash for approximately 7 minutes prior to automatic power shut off. When this happens, a battery recharge is necessary.

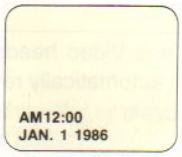
BATTERY

TAPE COUNTER/MEMORY INDICATION

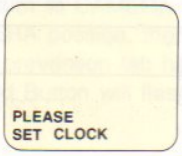
(NOTE: This indication will not be recorded.)

The tape counter helps you monitor the amount of tape used. "M" indicates the memory feature is operating. (See page 20.)

DATE/TIME INDICATION



With the date/time feature ON, the date and time will also be recorded with the scenes you record. (See page 19 for use.)

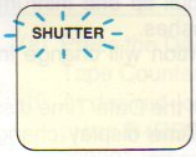


When adjusting the date and time for the first time or after replacing the battery, "PLEASE SET CLOCK" appears indicating the clock needs adjustment. (See page 19.)

RECORDING INDICATION

This green indicator will light while a camera recording is being made.

HIGH SPEED SHUTTER SWITCH INDICATION



When you're using the camera and the HIGH SPEED SHUTTER Switch is ON, this indicator flashes to indicate that rapid images of up to 1/1000th of a second will be clearly recorded without trails or blur. Later, you can review the fine points of the motion, in VHS Movie-Maker Still or VHS Still or Slow mode.

TAPE WARNING INDICATION

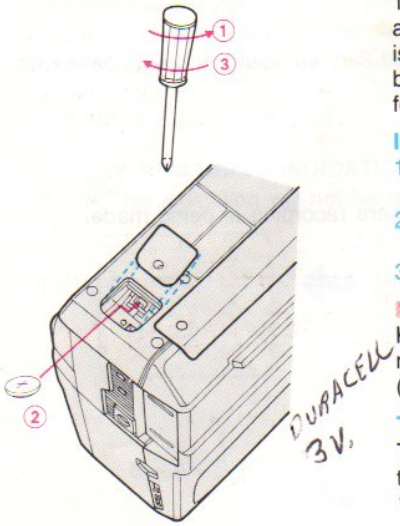
If the cassette tab is missing, this indicator will flash and no recording will start. (Refer to page 47.)

DEW INDICATION

This indicator appears if excessive moisture condenses in the unit. If the DEW Indicator is ON, the unit will not operate. If this happens, the DEW Indicator will flash for about 10 seconds and the VHS Movie-Maker will automatically turn off. In this case, wait until the indicator no longer flashes when the VHS Movie-Maker is turned on again.

NOTE: When more than one warning is required on display, "BATTERY" and "TAPE" will flash alternately.

DATE/TIME DISPLAY



The VHS Movie-Maker has an auto date function which calculates the date and time, including leap year, automatically until Dec 31 1999. This function is activated by the battery even when the VHS Movie-Maker power is off. The battery must be inserted before date and time can be kept automatically as follows.

INSTALLING THE BATTERY

1. Unscrew the panel lock screw by turning it counterclockwise and remove the Battery Cover from the Battery Compartment.
2. Install one battery (supplied) into its compartment (positive side up) and push it forward into the interior of the Battery Compartment.
3. Replace cover with its screw hole post next to the battery.

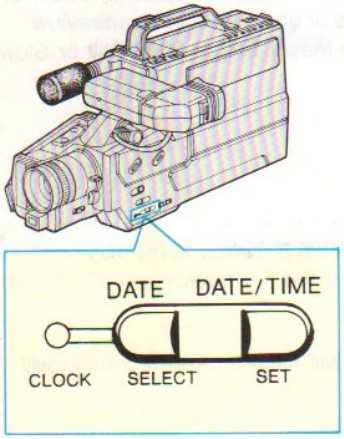
NOTE:

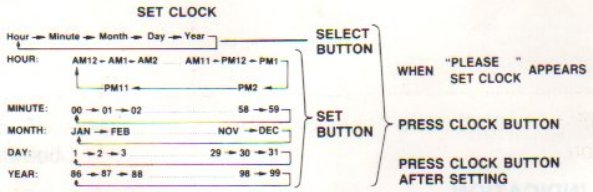
Keep the battery out of the reach of little children since swallowing the battery may be harmful. When replacing the battery, be sure to use the same battery (CR2032) or the equivalent.

TO SET THE DATE AND TIME

The Date and Time display may be set in Record/Pause or Stop mode and then recorded as an overlay in a recording when the display is on.

1. Press the DATE/TIME Button so that the Indicator displays "PLEASE SET CLOCK".
2. Press the CLOCK Button lightly by using a thin, dull tip end instrument, and the time and date are displayed. "AM 12" flashes.
3. When the SET Button is pressed, the flashing portion will change in the sequence as illustrated below.
4. The SELECT Button changes the flashing portion of the Date/Time display. The sequence order below shows how the Date/Time display changes.

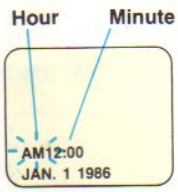


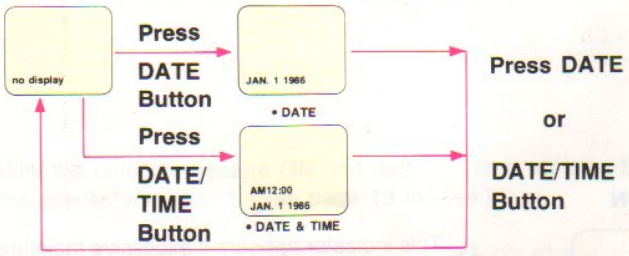

SET CLOCK
Hour → Minute → Month → Day → Year
SELECT BUTTON
HOUR: AM12 → AM1 → AM2 ... AM11 → PM12 → PM1 ... PM11 → PM2
MINUTE: 00 → 01 → 02 ... 58 → 59
MONTH: JAN → FEB ... NOV → DEC
DAY: 1 → 2 → 3 ... 29 → 30 → 31
YEAR: 86 → 87 → 88 ... 98 → 99
SET BUTTON
WHEN "PLEASE SET CLOCK" APPEARS
PRESS CLOCK BUTTON
PRESS CLOCK BUTTON AFTER SETTING

5. When all changes have been made, press the CLOCK Button again to lock in the new Date and Time.

TO DISPLAY THE DATE AND TIME

Turn the VHS Movie-Maker ON, make sure it is in the Camera Record position, and look into the EVF. By pressing the DATE or DATE/TIME Button, the date or date & time can be displayed as follows:





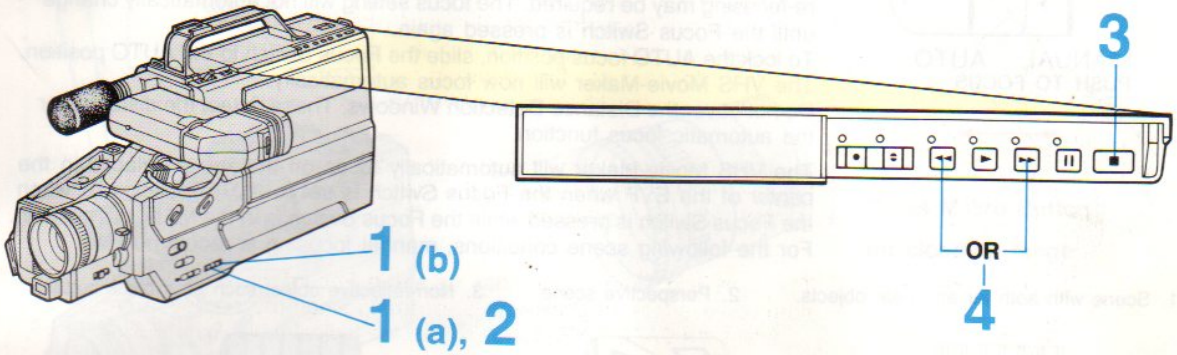
The selected DATE and TIME mode will be saved when the power is turned OFF.

NOTE:

- If the SET Button is held down the displays will advance rapidly.
- When adjusting the date and time for the first time or after discharging the clock battery, "PLEASE SET CLOCK" appears indicating the clock needs adjustment. The clock battery life is around 1 year. (See page 17 for indication.)
- It is recommended that the VHS Movie-Maker power is on before replacing the battery.
  This will save you from resetting the date and time.

TAPE COUNTER "0000"/COUNTER MEMORY

The Tape Counter keeps accurate track of where the tape is at all times so the beginning and ending of your programs can be easily located. When the Memory function is selected the VHS Movie-Maker will stop during Rewind or Fast Forward whenever it reaches the point where the tape counter was previously set to "0000".



1 (a) Press the D/M (DISPLAY/MEMORY) Button. Tape Counter and Battery indication appear. (b) At desired location: press R (RESET) Button to zero the counter. "0000" indication appears.	**2** To use the Memory feature, press DISPLAY/ MEMORY Button. "M" appears.
3 After recording or playback is finished, press STOP Button.	**4** Press FF, or REWIND Button. Tape stops whenever "M0000" is indicated.

Picture with no overlay

Tape counter helps you monitor amount of tape used.

"M" indicates memory feature is operating.

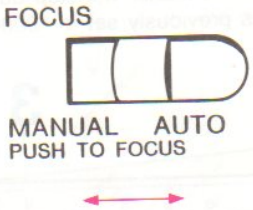
Press DISPLAY/ MEMORY Button

Press DISPLAY/ MEMORY Button

Press DISPLAY/ MEMORY Button

HOW TO USE THE RECORDING CONTROLS

FOCUS SYSTEM



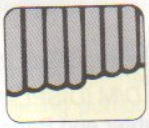
The VHS Movie-Maker can be focused both manually and automatically. Set the Focus Switch to the MANUAL position for manual focusing. You can now focus manually by rotating the lens focus ring.
Pressing the Focus Switch while in the MANUAL position activates the Auto Focus system until the Focus Switch is released. Should the subject change, re-focusing may be required. The focus setting will not automatically change until the Focus Switch is pressed again.
To lock the AUTO focus position, slide the Focus Switch to the AUTO position. The VHS Movie-Maker will now focus automatically.
Do not cover the Distance Detection Windows. These detect the distance for the automatic focus function.

The VHS Movie-Maker will automatically focus on the subject placed in the center of the EVF when the Focus Switch is set to AUTO position or when the Focus Switch is pressed while the Focus Switch is in the MANUAL position. For the following scene conditions, manual focusing is recommended.

1. Scene with both far and near objects.

2. Perspective scene.

3. Non-reflective object such as a black curtain.



4. Small object: Note.... Auto focus system needs a reflected area. When camera to object distance is 10 feet, an object must have a reflected area which is greater than a circle of approx. 4 inches in diameter.

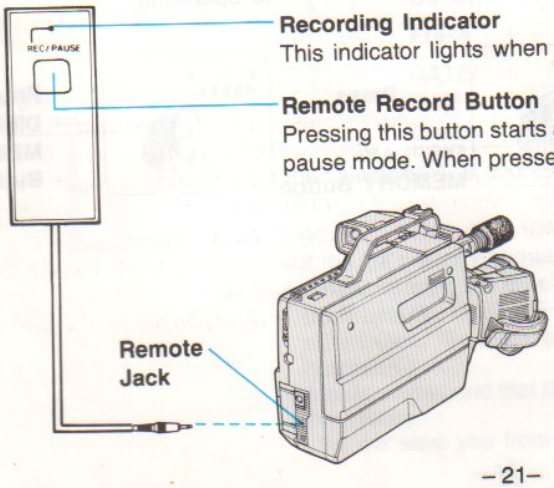
5. The auto focus lens may not focus on an object over approx. 40 feet due to the limitation of auto focus system.

Operation in the manual focus mode should be performed using the following focusing procedure.

a. Aim the VHS Movie-Maker at scene to be recorded.
b. Press and hold the T side of the Power Zoom Switch until the lens zooms to maximum close up setting.
c. Rotate the lens focus ring for the sharpest picture at this setting. (It may be necessary to back away from the subject to focus image properly).
d. Press the W side of the Power Zoom Switch. Picture should stay in focus over the entire zoom range. Re-focusing may be required when the VHS Movie-Maker is aimed at a new scene.

REMOTE CONTROL

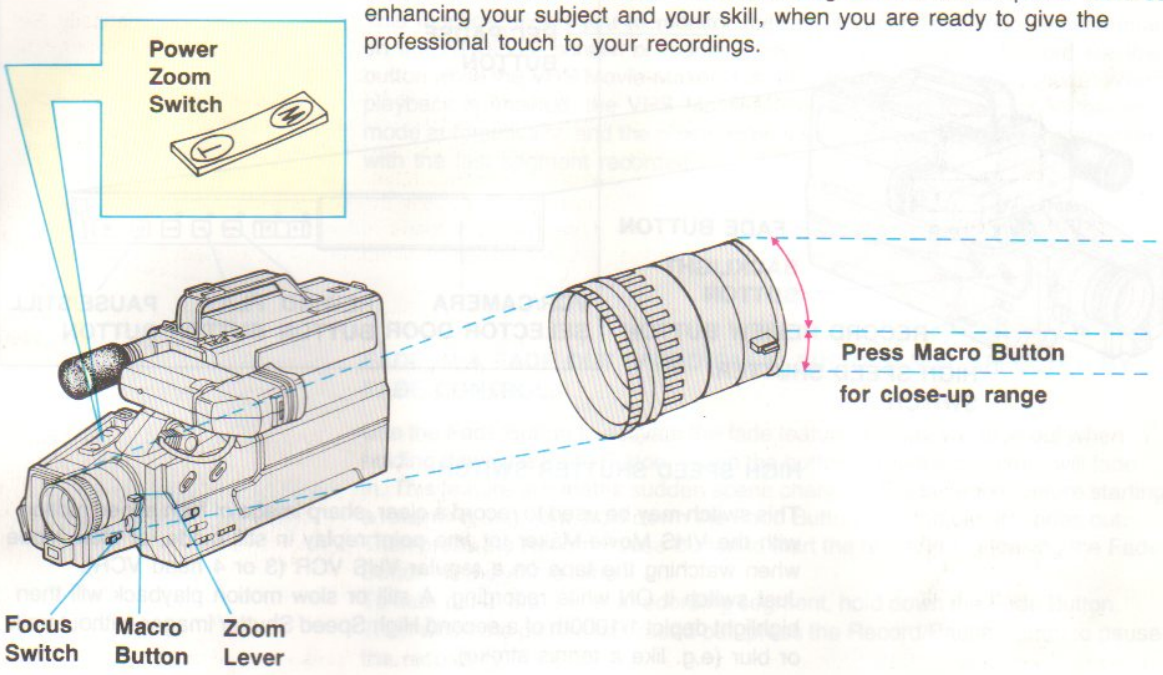
This control allows you to record from a remote position without disturbing the VHS Movie-Maker or the subject.

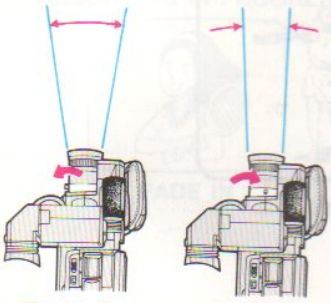


Recording Indicator
This indicator lights when the VHS Movie-Maker is in record mode.

Remote Record Button
Pressing this button starts a recording when the VHS Movie-Maker is in record pause mode. When pressed again, it resets the VHS Movie-Maker to record/

Your new VHS Movie-Maker has been designed with these special features enhancing your subject and your skill, when you are ready to give the professional touch to your recordings.





ZOOMING IN OR OUT ON YOUR SUBJECT

The VHS Movie-Maker has a power zoom lens that gently changes the viewing angle. Zooming is possible by lightly pressing the T or W side of the Power Zoom Switch. The power zoom is conveniently located at your finger tips on the hand grip so you can control it with one hand while focusing with your left. You can also manually zoom at anytime; the zoom ring has a handy lever for steady turning.

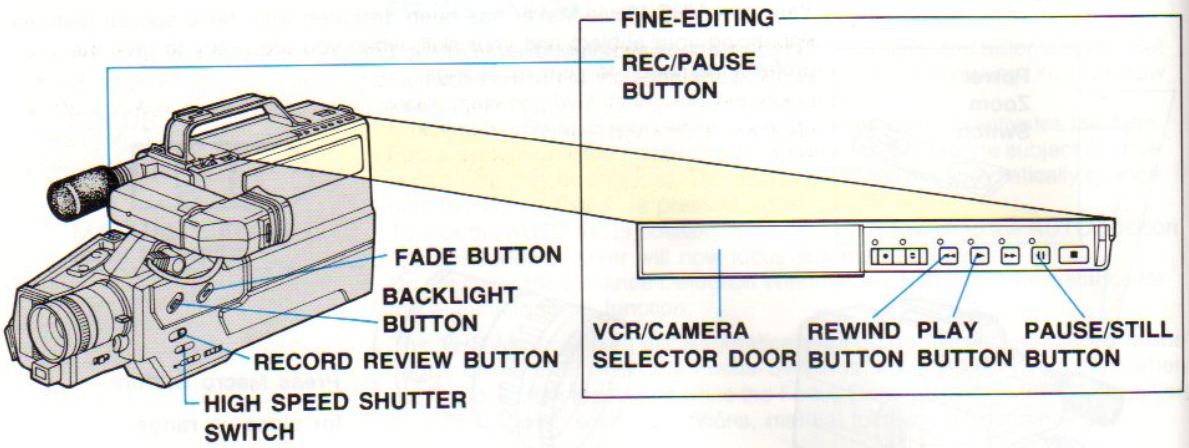
TAKING CLOSE-UP PICTURES

A sharp focus of greatly enlarged images as close as one inch from the lens lets you fill your screen with a world in miniature. The Macro function is for close up images and is used apart from normal camera recording.

1. Set the Focus Switch to MANUAL position.
2. Turn the Zoom Ring Lever to the extreme left position.
3. Press the Macro (green) Button on the Zoom Ring Lever and set the Zoom Ring Lever for Macro focus range adjustment.

• When using the Macro function, it may be helpful to steady the VHS Movie-Maker by mounting it on a tripod.

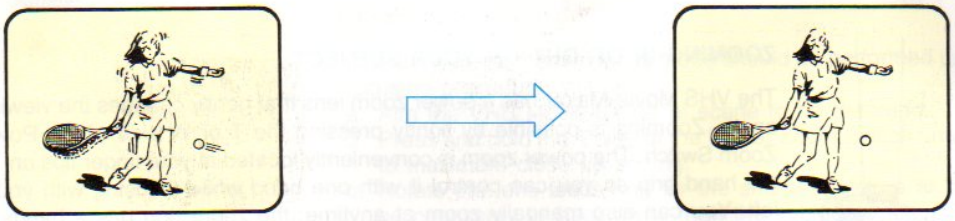
USEFUL FEATURES FOR RECORDING (CONTINUED)



HIGH SPEED SHUTTER SWITCH

This switch may be used to record a clear, sharp image of high speed motion with the VHS Movie-Maker for fine point replay in still mode, or slow mode when watching the tape on a regular VHS VCR (3 or 4 head VCR).
Just switch it ON while recording. A still or slow motion playback will then highlight depict 1/1000th of a second High Speed Shutter images without trails or blur (e.g. like a tennis stroke).

IMAGE IN STILL OR SLOW MODE



OFF **HIGH SPEED SHUTTER on VHS Movie** **ON**

NOTE:

- It is recommended that you use this feature outdoors for better color reproduction. The High Speed Shutter requires sufficient lighting to work effectively. For indoor High Speed Shutter recording you may find that additional halogen or tungsten light should be provided. Fluorescent light will degrade the picture quality.
- The Auto Focus function may not operate properly if light is not sufficient when you are using the High Speed Shutter Switch.

BACKLIGHT BUTTON

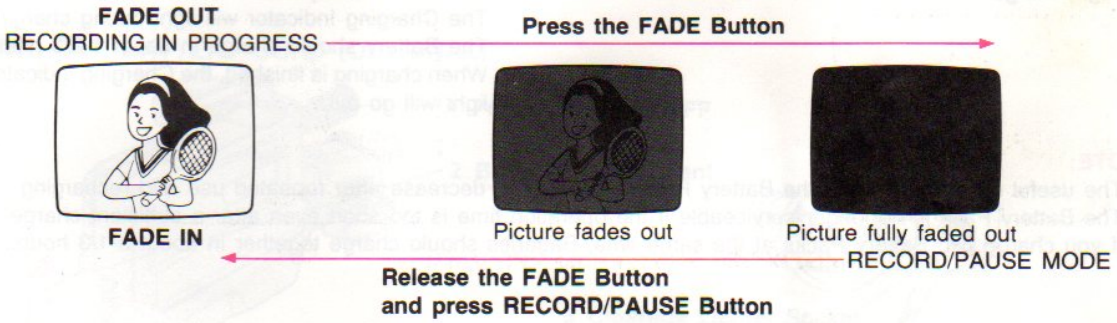
This Button may be used to adjust the light level on a recording subject that is darker than the surrounding scene. You will find this backlight adjustment useful for recording a subject in a shadowed area or in front of strong backlight. Press the Backlight Button while recording a high contrast scene, then release when the lighting condition changes.

RECORD REVIEW (INSTANT REPLAY)

This function allows you to monitor the last 4 seconds of recorded material on the viewfinder screen or monitor screen by pressing the Record Review button while the VHS Movie-Maker is in the camera record/pause mode. When playback is finished, the VHS Movie-Maker will return to the record/pause mode automatically, and the next segment will be recorded in synchronization with the last segment recorded.

FADE IN & FADE OUT (VIDEO ONLY. AUDIO IS NOT AFFECTED BY FADE CONTROL.)

Use the Fade Button to activate the fade feature. Picture will fade out when holding down the Fade Button. When the button is released, picture will fade in. This feature eliminates sudden scene changes. For instance, before starting a recording segment, hold down the Fade Button until the picture fades out. Then press the Record/Pause Button to start the recording, releasing the Fade Button at the same time.
To fade out at the end of a recording segment, hold down the Fade Button. Then when the picture has faded out, press the Record/Pause Button to pause the recording.



FINE-EDITING

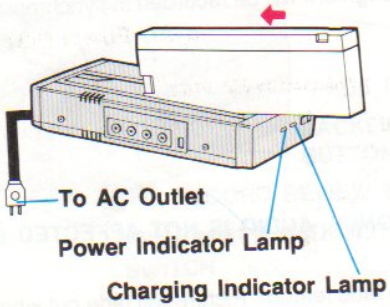
To obtain proper continuity when taping from the stop mode, or after charging the battery:

1. Rewind the tape for a short distance (about 5 digits on Tape Counter) by pressing REWIND Button.
   Then press the PLAY Button and view the picture on the viewfinder.
2. At the location where you wish to continue recording, press VCR PAUSE/STILL Button.
   A. Then, Slide VCR/CAMERA Selector Door to CAMERA position; the VHS Movie-Maker will go into the record/pause mode and then press Camera REC/PAUSE Button to continue recording.
   B. For VCR recording hold RECORD Button in press PLAY Button and then press VCR PAUSE/STILL Button again, the VHS Movie-Maker will begin recording.

BATTERY CHARGING WITH AC ADAPTOR

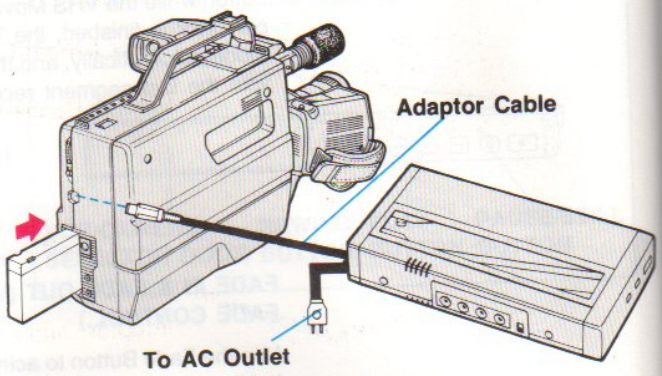
Your AC Adaptor can be used to charge Battery Packs in either of the two ways shown below, or both together to charge two Battery Packs at the same time.

CHARGING DIRECTLY ON THE AC ADAPTOR



1. Connect the AC Power Plug of the AC Adaptor to an AC outlet.
   Power Indicator lights up.
2. Place the Battery Pack in the AC Adaptor as illustrated here.
   The Charging Indicator will light during charging.
   The Battery should charge in about 1-2/3 hours.
   When charging is finished, the Charging Indicator light will go out.

CHARGING IN THE VHS MOVIE



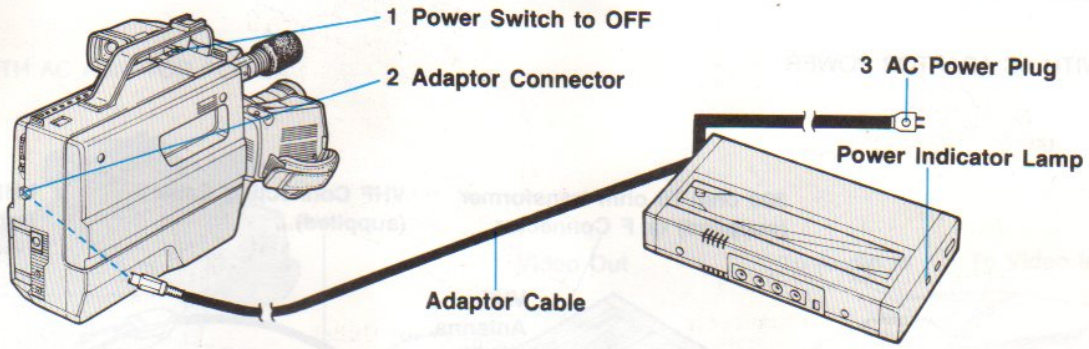
1. Be sure to turn the VHS Movie-Maker OFF.
   Battery Charging will not take place if the VHS Movie-Maker is ON.
2. Attach the Adaptor Cable of the AC Adaptor to the Adaptor Connector of the VHS Movie-Maker.
3. Connect the AC Power Plug of the AC Adaptor to an AC outlet. Power Indicator lights up.
4. Insert the Battery Pack.
   The Charging Indicator will light during charging.
   The Battery should charge in about 1-2/3 hours.
   When charging is finished, the Charging Indicator light will go out.

NOTE:
- The useful operation time of the Battery Pack will gradually decrease after repeated use and recharging. The Battery Pack is no longer serviceable if the operation time is too short even after a sufficient charge.
- If you charge two Battery Packs at the same time, Batteries should charge together in about 3-1/3 hours.

A WORD ABOUT THE BATTERY PACK

- Store the Battery Pack in a cool, dry, and dark place.
- Do not drop it or subject it to strong jolts.
- Always charge the Battery Pack soon after full use. Discharging for a long time may make its life shorter and recharging impossible.
- Be careful not to put the Battery Pack near fire because this may short-circuit it.
- Batteries should never be disposed of in fire.
- Do not use any other chargers than specified.
- Do not use the Battery Pack for appliances other than specified.
- Do not use it below 0°C or above 40°C (32°F or 104°F).
  If the temperature exceeds these limits a safety device will automatically prevent operation of battery.
- Should it be broken and the internal electrolyte containing sulfuric acid be spilt over skin or clothing, be sure to wash immediately in water or neutralize with ammonium water or sodium bicarbonate and call your doctor.
- Do not use an insufficiently charged or worn out Battery Pack.

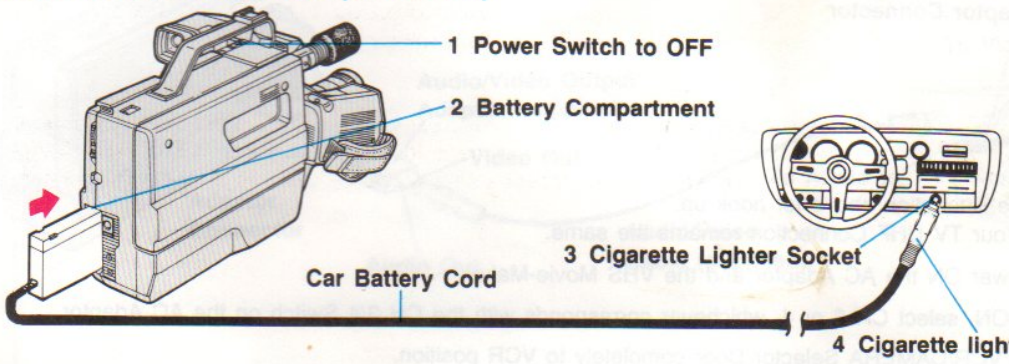
USING AC ADAPTOR (SUPPLIED)



1. Power OFF to connect.
   Be sure to turn the power OFF.
2. Attach the Adaptor Cable of the AC Adaptor to the Adaptor Connector of the VHS Movie-Maker.
3. Connect the AC Power Plug to an AC outlet.
   Power Indicator lights up.

CAUTION: Operation at a voltage setting of 110/220/240V AC may require the use of a different AC plug. Please contact either a local or foreign electrical parts distributor for assistance in selecting an alternate AC plug.
We recommend using the accessory Power Plug Adaptor (VJSS0070) in an area which has special AC outlets.

USING CAR BATTERY CORD (OPTIONAL)



1. Power OFF to connect.
   Be sure to turn the VHS Movie-Maker OFF.
2. Insert the Car Battery Cord into the battery compartment on the VHS Movie-Maker.
3. Take the lighter out of its socket.
4. Start the car engine and insert the cigarette lighter plug of the Car Battery Cord into the socket. For fuse (in plug) replacement, use the exact current rating (Amps).

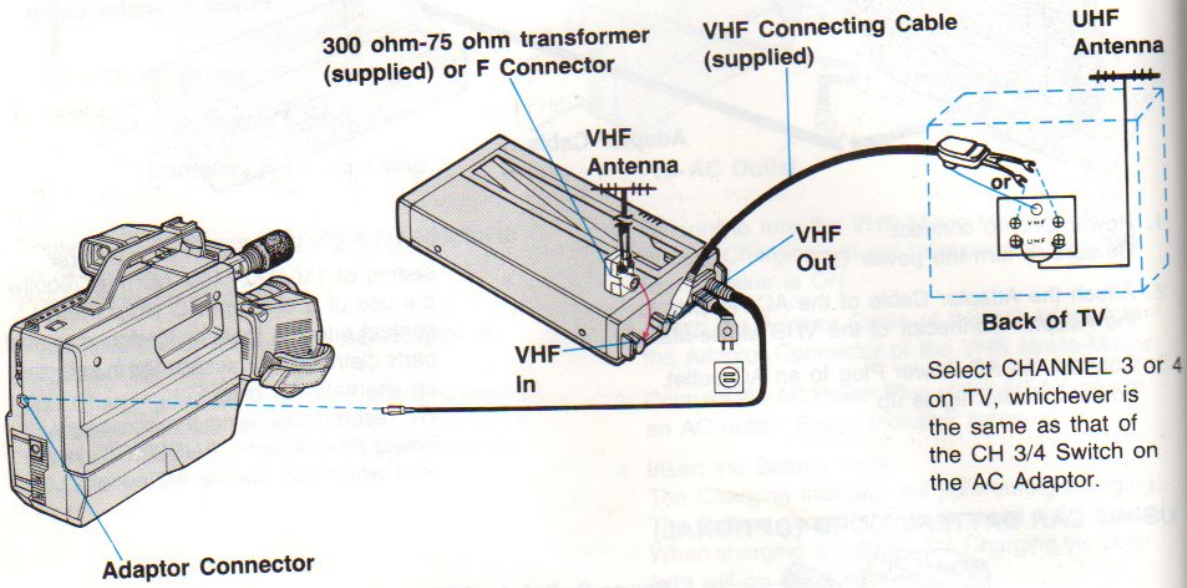
NOTE:
- Be sure to start the car engine before inserting the cigarette lighter plug of the Car Battery Cord into the cigarette lighter socket; otherwise, the cigarette lighter plug fuse may burn out when you start the engine.
- The car engine should be running while the VHS Movie-Maker is in operation. Make sure your car is in an open, well ventilated area.
- Disconnect the cigarette lighter plug when the VHS Movie-Maker is not being used.

How to use a TV for tape viewing and to monitor your recordings

The VHS Movie-Maker may be connected to a TV for playing back tapes or to monitor what you are recording.

WHEN YOUR TV DOES NOT HAVE VIDEO IN & AUDIO IN TERMINALS

- WITH AC ADAPTOR POWER



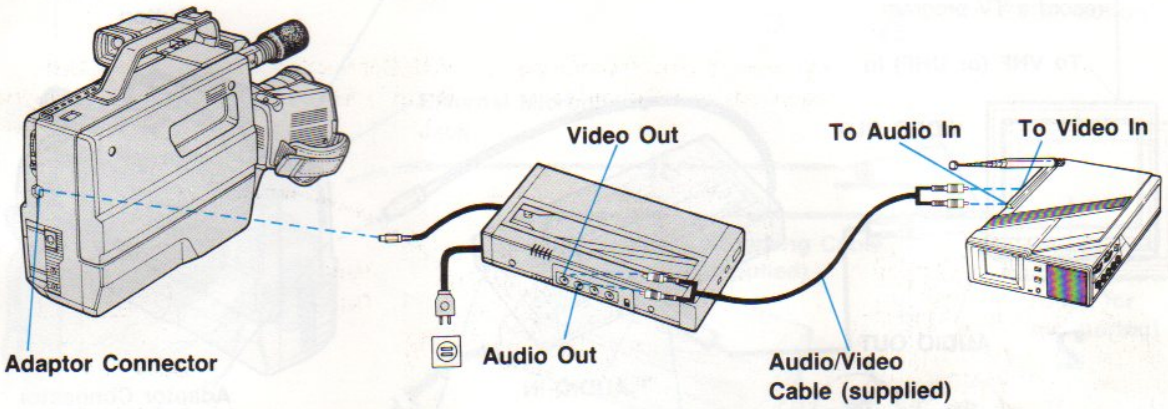
Select CHANNEL 3 or 4 on TV, whichever is the same as that of the CH 3/4 Switch on the AC Adaptor.

1. Follow the illustration above for hook up.
   NOTE: Your TV UHF Connection remains the same.
2. Press Power ON the AC Adaptor and the VHS Movie-Maker.
3. Turn TV ON, select CH 3 or 4, whichever corresponds with the CH 3/4 Switch on the AC Adaptor.
4. Slide the VCR/CAMERA Selector Door completely to VCR position.
   - The VHS Movie-Maker is in VCR mode when ON, and TV mode when turned OFF (with AC Adaptor ON and the VCR/CAMERA Selector Door is in VCR position).
5. Insert cassette.
6. Press the PLAY Button.
   - TO WATCH TV PROGRAMS:
     1. Turn the VHS Movie-Maker OFF.
     2. Turn TV ON and select the desired channel.

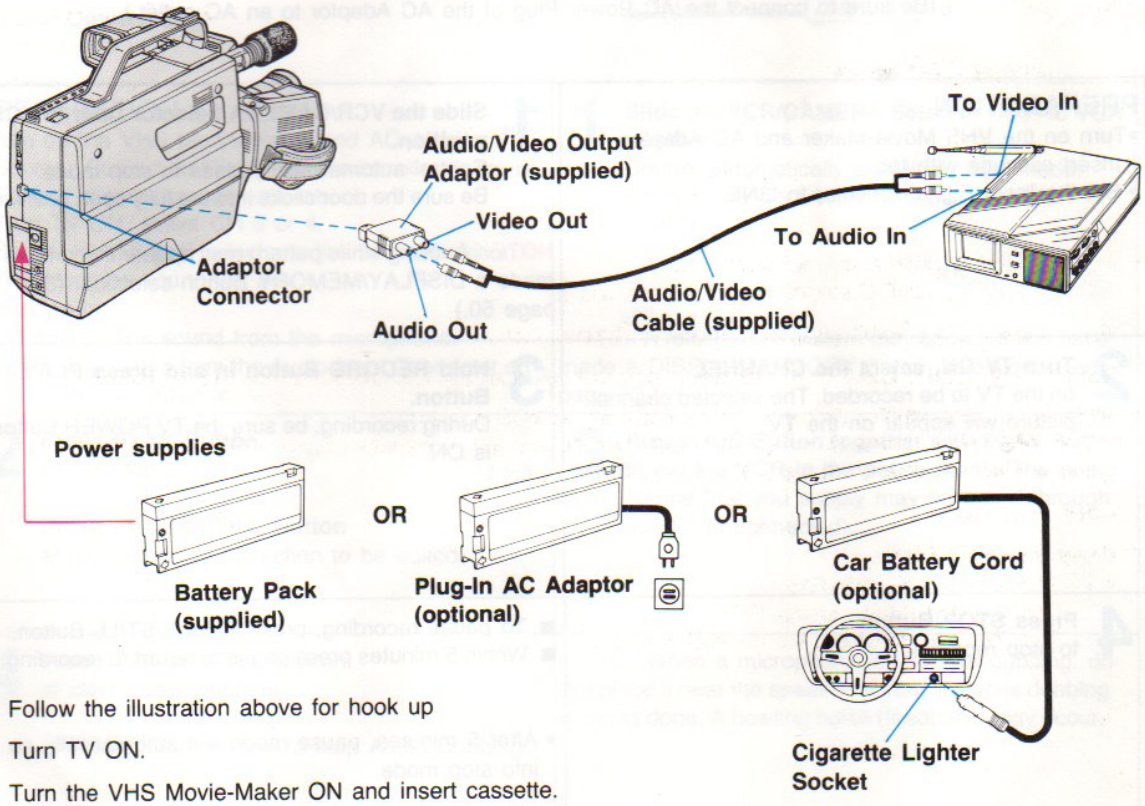
If your TV has AUDIO IN and VIDEO IN terminals, you'll probably want to connect the VHS Movie-Maker to these terminals to receive a higher quality picture and sound.

WHEN YOUR TV HAS VIDEO IN & AUDIO IN TERMINALS

• WITH AC ADAPTOR POWER



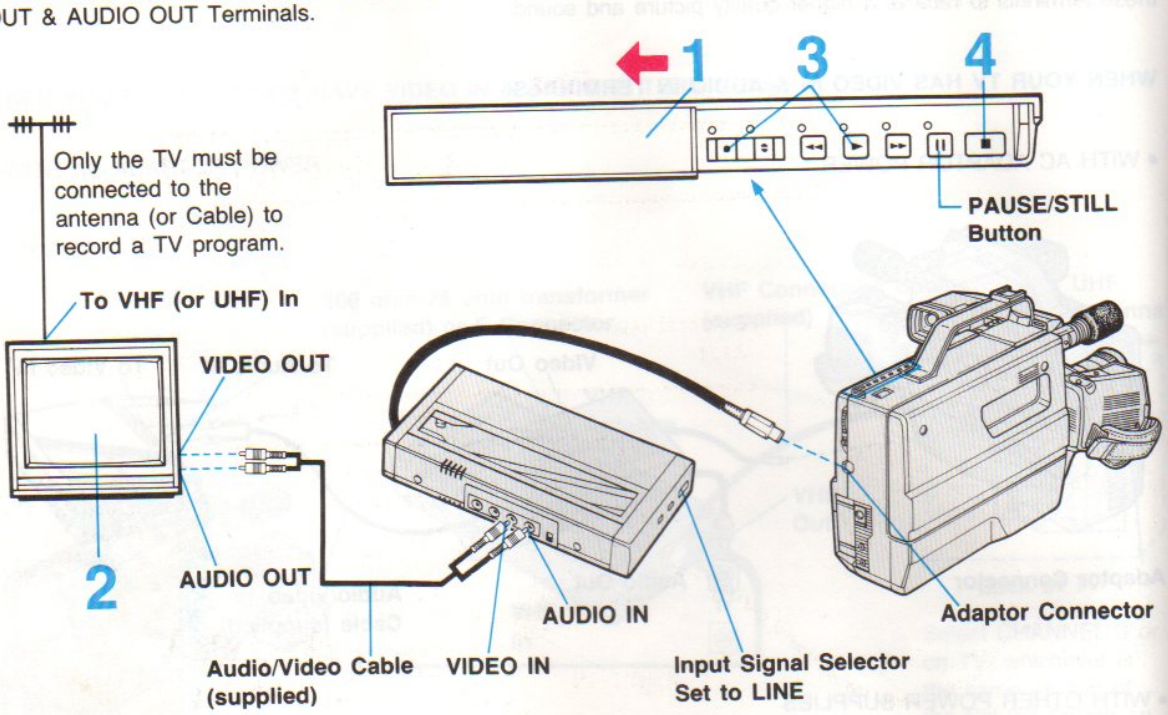
• WITH OTHER POWER SUPPLIES



1. Follow the illustration above for hook up
2. Turn TV ON.
3. Turn the VHS Movie-Maker ON and insert cassette.
4. Press PLAY Button.

TO RECORD A TV PROGRAM

The VHS Movie-Maker enables you to record a TV program through the AC Adaptor when the TV has VIDEO OUT & AUDIO OUT Terminals.



(Be sure to connect the AC Power Plug of the AC Adaptor to an AC outlet.)

PREPARATION
- Turn on the VHS Movie-Maker and AC Adaptor.
- Insert cassette with tab.
- Set the Input Signal Selector to LINE.

1 **Slide the VCR/CAMERA Selector Door to VCR position.**
Control automatically passes to stop mode.
Be sure the door clicks into the fully open position.

NOTE: A rolling white pattern may appear if you have made a DISPLAY/MEMORY Button selection. (See page 50.)

2 **Turn TV ON, select the CHANNEL** on the TV to be recorded. The selected channel picture will appear on the TV.

3 **Hold RECORD Button in and press PLAY Button.**
During recording, be sure the TV POWER Button is ON.

4 **Press STOP Button** to stop recording.

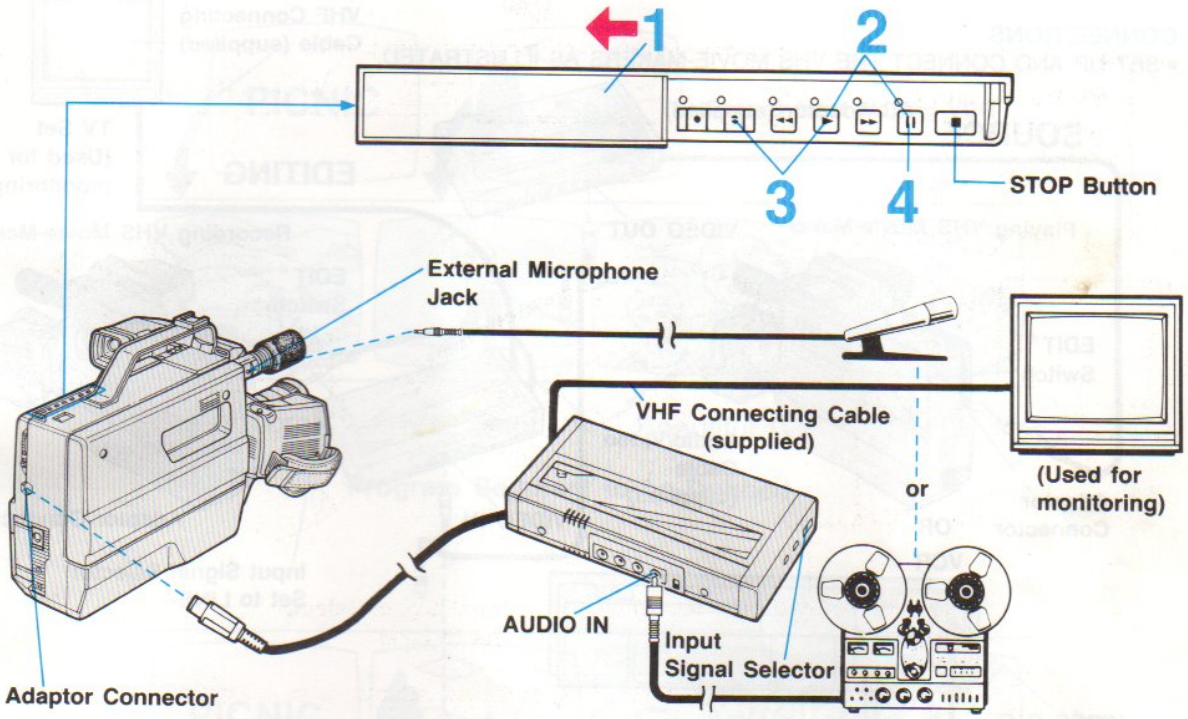
- To pause recording, press PAUSE/STILL Button.
- Within 5 minutes press pause to return to recording.

- After 5 minutes, pause mode will automatically go into stop mode.

AUDIO DUBBING

VR9240AV01

Your own soundtrack may be substituted onto a previously recorded tape with either a microphone, tape recorder, or your own component audio system.



PREPARATION

- Turn on the VHS Movie-Maker and AC Adaptor.
- Source: Connect the Microphone or external audio source.
  Editing: Insert cassette with tab.
- Turn TV ON, select CH 3 or 4.
- Set the Input Signal Selector to the desired position.
  The recorded sound will be:
  position in:
  CAMERA: The sound from the microphone.
  LINE: The sound from the Audio Input Connector on the AC Adaptor.

1 **Slide the VCR/CAMERA Selector Door to VCR position.**
Control automatically passes to stop mode. Be sure the door clicks into the fully open position.

NOTE: A rolling white pattern may appear if you have made a DISPLAY/MEMORY Button selection. (See page 50.)

2 **Press PLAY Button.**
Review tape on TV.

Press PAUSE/STILL Button
at the beginning of section to be edited.

3 **Press DUB Button together with PLAY Button** to put the VCR in the pause mode. The audio source that you supply may be heard through the TV (if connected).

4 **Press PAUSE/STILL Button**
to start Audio Dubbing.

■ Press STOP Button to stop Audio Dubbing.

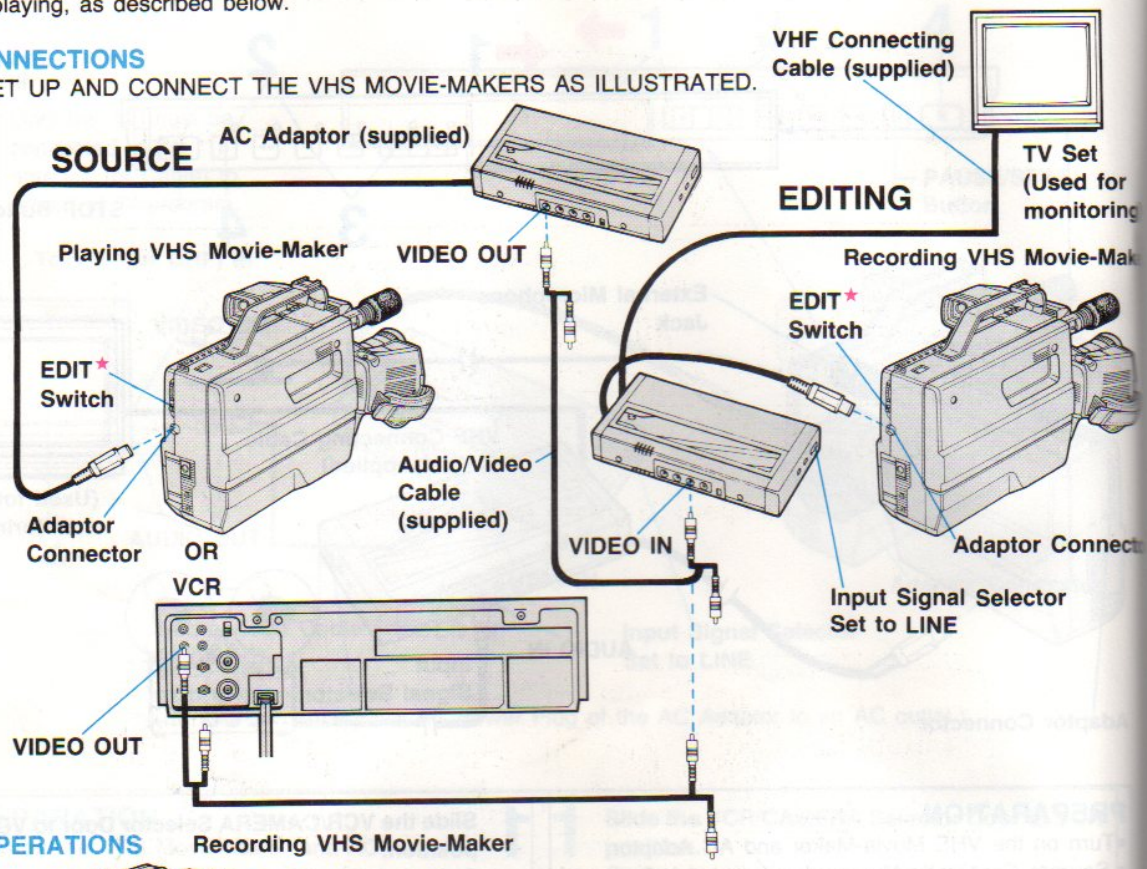
NOTE: When a microphone is used for dubbing, do not place it near the speaker of your TV while dubbing is being done. A howling noise (feedback) may occur.

VIDEO DUBBING

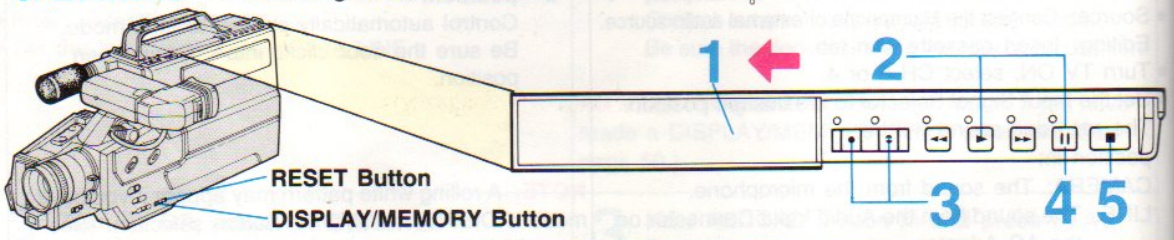
With your VHS Movie-Maker you can edit your video tapes by replacing existing video segments of the tape with a new video segment (dubbing). Use two VHS Movie-Makers or your VHS Movie-Maker with another VCR for playing, as described below.

CONNECTIONS

• SET UP AND CONNECT THE VHS MOVIE-MAKERS AS ILLUSTRATED.



OPERATIONS



PREPARATION

- Press Power ON both AC Adaptors and the VHS Movie-Makers.
- Source: Insert cassette to play.
- Editing: Insert cassette with tab to be recorded.
- Turn TV ON, select CH3 or 4.
- Set the AC Adaptor's Input Signal Selector for Recording VHS Movie-Maker to LINE.
- Prepare the second (playing) VHS Movie-Maker or VCR as video source.

★ Set the EDIT switch ON to enhance the picture quality of the dubbed tape.
Otherwise this switch is normally set to OFF.

1 Slide the VCR/CAMERA Selector Door to VCR position on both VHS Movie-Makers.

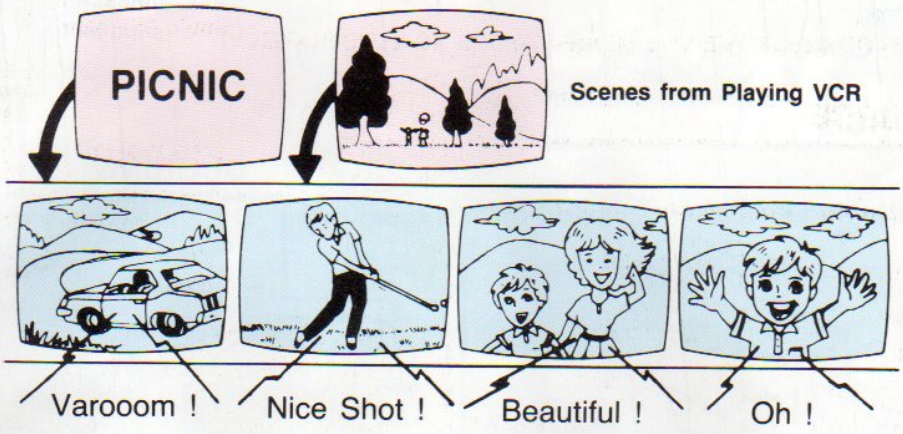
Be sure the door clicks into the fully open position.

2 Press PLAY Button.

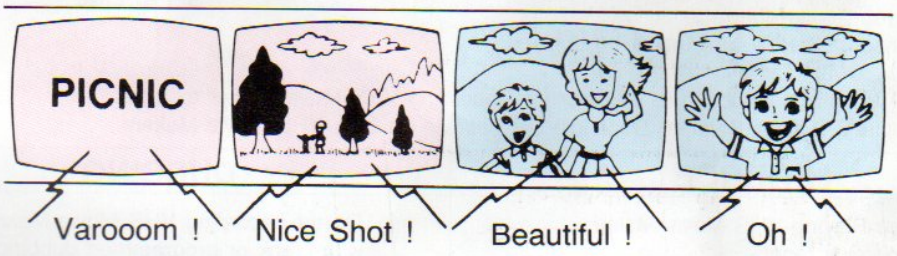
Review tape on TV.
Then press PAUSE/STILL Button.

Do this to locate the beginning of desired section of both tapes.

THE DUB BUTTON EDITS YOUR ORIGINAL TAPE WITH A NEW VIDEO SCENE



Program Segment to be Dubbed



New Dubbed Program Segment

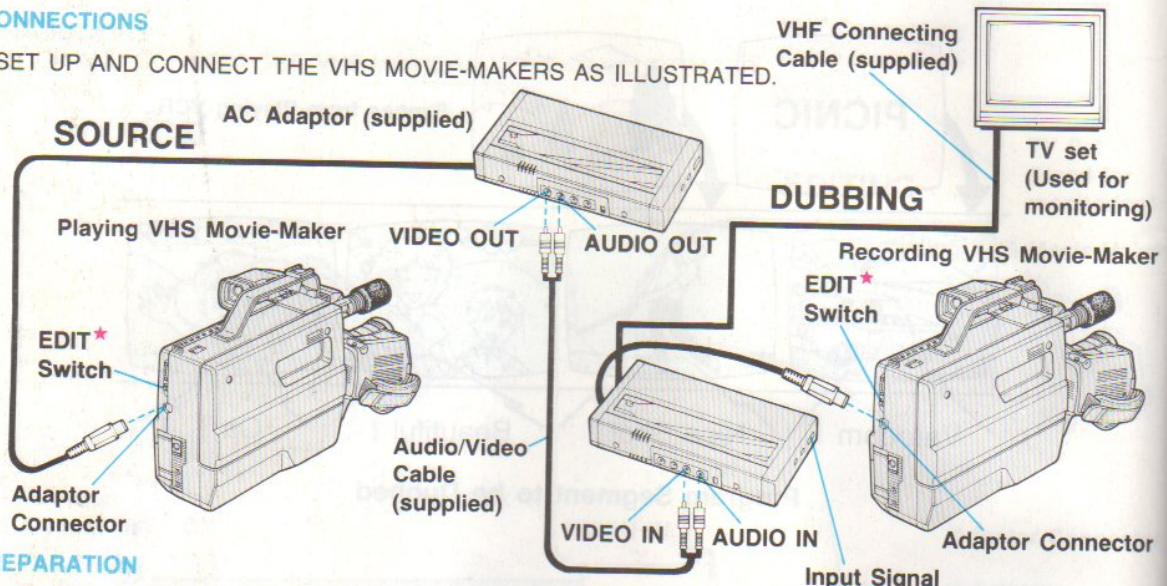
FOR EDITING	TO BEGIN EDITING	TO END EDITING
3 **Press DUB Button together with REC Button, only on Editing VHS Movie-Maker** This sets the Dub Pause mode. – Memory-Stop editing – Now, if desired, press DISPLAY/MEMORY Button for the "M" mark.	**4** **Release PAUSE Buttons on both VHS Movie-Makers simultaneously.** • Try this technique beforehand to match the timing easily. • If the "M" mark is set, editing will stop at "0000".	**5** **Press STOP Button to stop Video Dubbing.** MEMORY-STOP EDITING: Use the DISPLAY/MEMORY Button to automatically stop EDITING with the following preparations. (a) In STEP 2 on the EDITING tape, locate the end of portion to be edited, then reset tape counter to 0000. (b) Rewind to the editing start point, and continue STEP 2.

RE-RECORDING (VIDEO/AUDIO DUBBING)

It is simple to dub tapes using two VHS Movie-Makers or another VCR for playing or recording as described below. You are cautioned that the unauthorized exchanging and/or copying of copyrighted recordings may be copyright infringement.

CONNECTIONS

• SET UP AND CONNECT THE VHS MOVIE-MAKERS AS ILLUSTRATED.



PREPARATION

- Press Power ON both AC Adaptors and the VHS Movie-Makers.
- Source: Insert master cassette.
  Dubbing: Insert cassette with tab to be dubbed.
- Turn TV ON, select CH 3 or 4.
- Set the AC Adaptor's Input Signal selector for Recording VHS Movie-Maker to LINE.
- Slide the VCR/CAMERA Selector Door to VCR position on both VHS Movie-Makers.

SOURCE

On the Playing VHS Movie-Maker with original tape.

1. Set the EDIT Switch★ to ON.
2. Press DISPLAY/MEMORY Button to clear display. See page 20.
   (Dubbing VHS Movie-Maker will record what you see on playback screen.)
   Setup to Pause at desired playback
3. Press PLAY, then review on monitor TV.
4. Press PAUSE on the VHS Movie-Maker at the start of the scene you will want to playback to the Dubbing VHS Movie-Maker:
   The VHS Movie-Maker is now ready in Play/Pause mode.

DUBBING

On the recording VHS Movie-Maker with blank or programmed dubbing tape.

5. Set the EDIT Switch★ to ON.
   Setup to Pause at desired recording
6. Press PLAY Button, review tape on the VHS Movie-Maker with monitor TV.
7. Press PAUSE, at start of section you desire to dub;
8. Press DISPLAY/MEMORY Button so that "M" appears, then press RESET Button to "0000".
9. Press RECORD and PLAY Buttons together: Dubbing VHS Movie-Maker is now ready in Record/Pause mode.

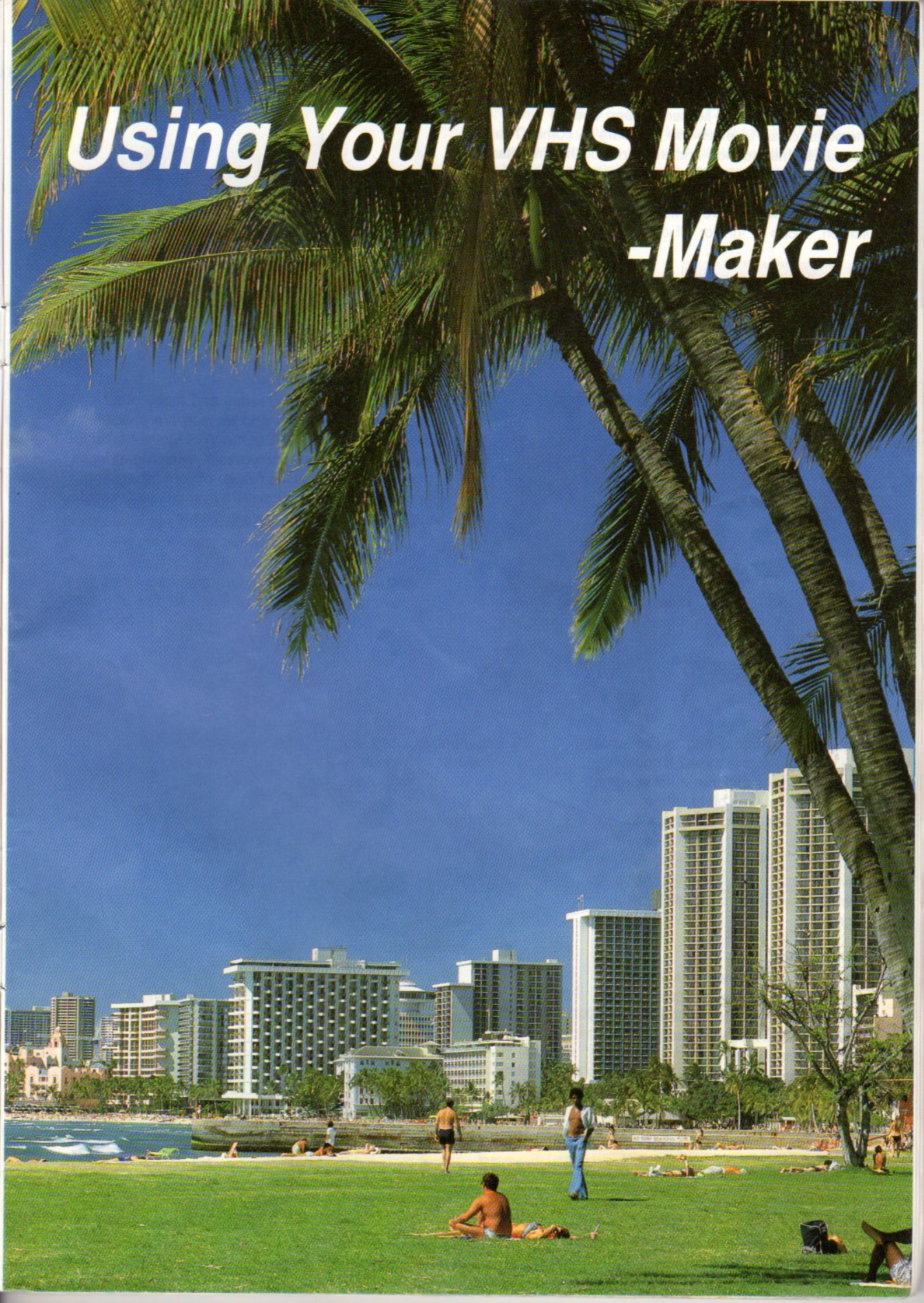
Begin Dubbing

10. Release the VHS Movie-Maker Play/Pause mode and Dubbing VHS Movie-Maker Record/Pause mode at the same time to begin Dubbing.
11. Press STOP Buttons on both VHS Movie-Makers to stop Dubbing.

NOTE:

- Source tapes from other VCRs must be pre-recorded in SP mode for VHS Movie-Maker playback.
- ★ Be sure that the EDIT Switch is always set to OFF when you finish dubbing tapes.
- For technical reasons, dubbing a tape may reduce its quality.

Using Your VHS Movie -Maker



EVENTS YOU CAN SHARE WITH VIDEO

Use your VHS Movie-Maker to keep special family moments close to everyone for years to come. The various sights, sounds and incidents of the important expressive events in life can be recorded on video tape. Everyone will enjoy handling the VHS Movie-Maker and children love to watch themselves on a TV screen. Video is fun for all of the family.

Special Family Gatherings

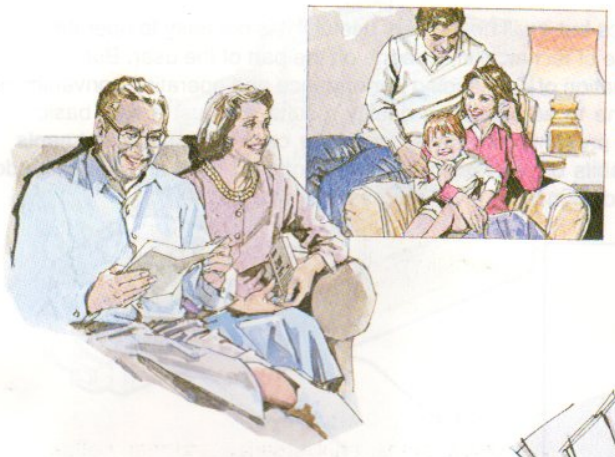
Weddings, births, anniversaries and many other occasions of celebration and reunion are special gatherings to remember. But the VHS Movie-Maker is so easy to use you will find yourself recording all kinds of things. You can see the results of your "snapshots" right on the scene. If you make a mistake, just record over it again, there is no wasted tape.

Children Growing Up

Wouldn't it be interesting to see what you were like at age three? It could be a reality for your children. First words, first steps, first time off to school, there is nothing like video for bringing back all of those once-in-a-lifetime events. And when your children grow up and have children of their own you can give them a video copy of those special moments.

Travel Video

Your new VHS Movie-Maker is so compact and lightweight that you can easily take it traveling. A video vacation is much more fun, you bring home your adventures as video entertainment for all to join in.



Video Letters

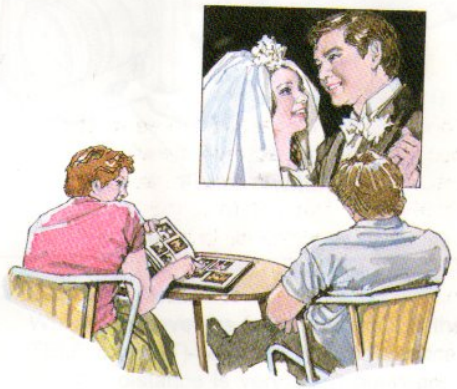
Video is a great way of keeping in touch with family and friends. The video advantage is that your friends and relatives can see you in their own homes. If you are far away from someone dear to you, you can close that distance with a video letter.

Valuable Learning Aid

Musical instruments, golf, dance, tennis ... the possibilities are unlimited. At home you can view your instructor's example as many times as you like. Set the VHS Movie-Maker on a tripod and record your own performance for comparison. With video you will find how well your enjoyment is expressed.

Video Album

Take your photo albums and turn them into video albums. Just use your VHS Movie-Maker to record each photograph, in any order you want. Then, on TV, you can relate the situation and impressions to everyone at the same time.



Video Hobby Collection

Say your hobby is bird watching. Instead of just looking at birds, you can use the VHS Movie-Maker to create a "video collection of wild life, complete with bird calls". The VHS Movie-Maker is quiet, you can record continuously for long periods of time without disturbing your subject or changing the tape.

CHECK BEFORE RECORDING YOUR SCENE

A video camera may have excellent basic performance but it will not be very useful if it is not easy to operate. In the past, good video cameras required a fair degree of technical knowledge on the part of the user. But the VHS Movie-Maker design offers you the ideal combination of outstanding performance and operating convenience. Simple convenient functions make it easy for anyone to achieve high quality results with just a little basic knowledge and practice. These functions also help preventing mistakes and take care of many adjustments automatically. Follow the recommended tips and habits of professional handling offered here and you will add to your recordings what your VHS Movie-Maker is designed to give, professional results.

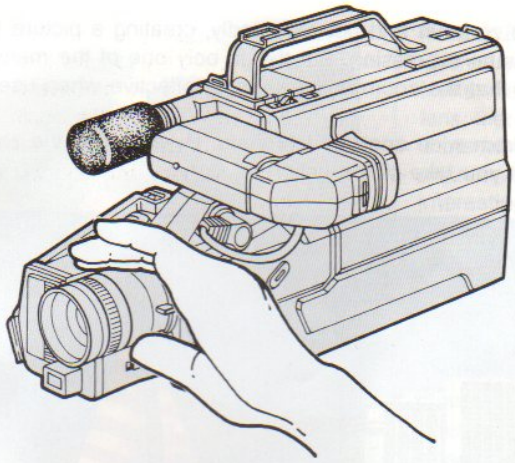
Check the EVF display to confirm conditions of battery, and other functions.

Viewfinder

BATTERY,
TAPE, HIGH SPEED SHUTTER
TAPE COUNTER/MEMORY, DATE/TIME,
DEW Indicators

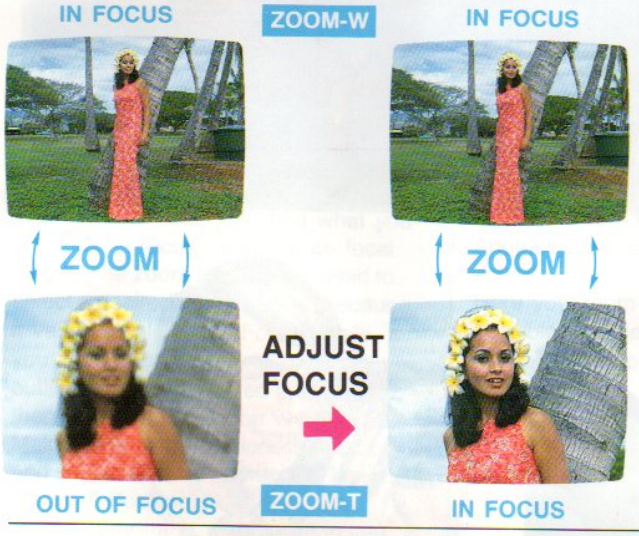
RECORDING Indication

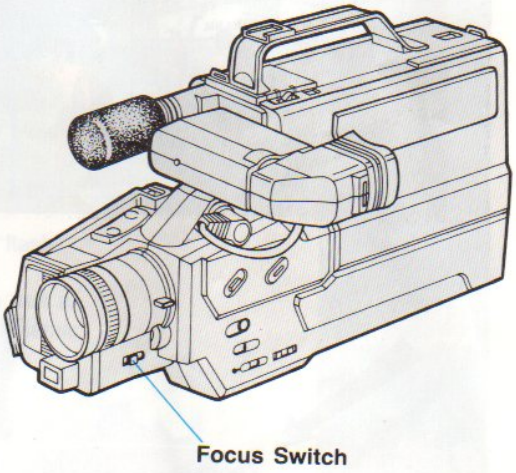
PROPER FOCUS

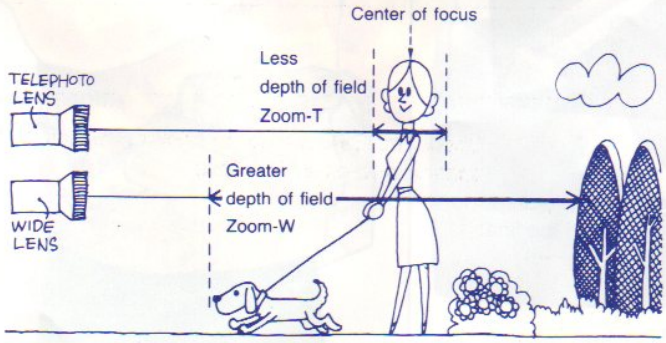


ADJUSTING FOCUS FOR FULL W-T RANGE

In the AUTO position the focus will be adjusted continuously.
When not using the auto focus feature, you can adjust the focus by hand or press the Focus Switch while it is in the MANUAL position. Focus the VHS Movie-Maker after setting the lens to the TELE (Zoom-T) position. When you focus the VHS Movie-Maker you move the center of focus back and forth a certain distance from the VHS Movie-Maker. Setting the focus in the TELE (Zoom-T) position allows you to see that the center of focus is at the place you will want to zoom-in. This not only makes it easier to adjust focus, it also assures that you will stay in focus at any other zoom lens position.







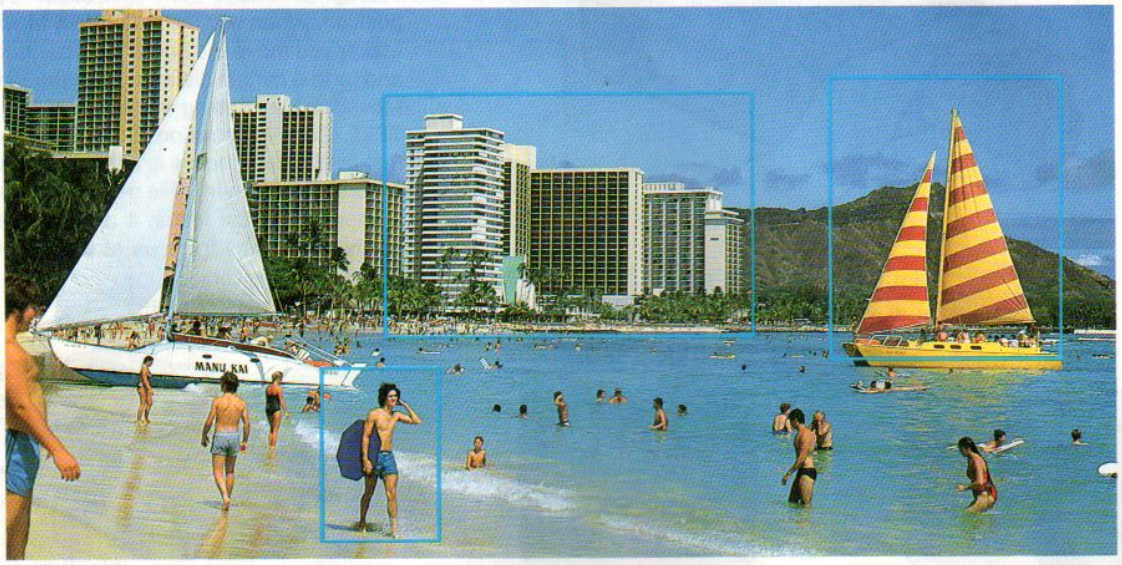
Depth of Field

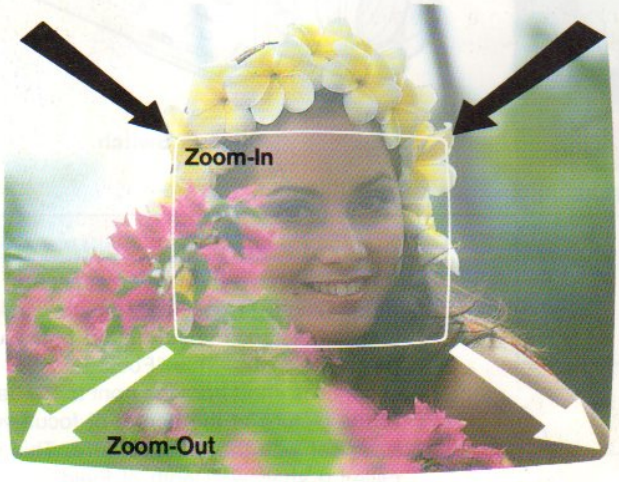
While you have the focus adjusted in the TELE (zoom-T) position, you may notice that the distance is very short between objects in focus. This "Focal Length" distance is short from the front to the back of the picture at the center of focus you have set with the focus feature. This is called a shallow "Depth of Field".
Move the zoom lever slowly toward the WIDE (zoom-W) position, for a deep "depth of field". The distance is greater between objects in focus. If you are following a moving subject, set the focusing ring to 5m and set the zoom ring to the WIDE position. Then, as the subject moves, the VHS Movie-Maker will usually have enough depth of field to keep their image in focus.

USING A ZOOM LENS

Many people when first using a VHS Movie-Maker tend to zoom in and out repeatedly, creating a picture that is tiring to watch. Certainly, the "zoom" has its place in visual expression. But this is only one of the many capabilities of a zoom lens. With experience, you will find that the zoom action is most effective when used sparingly.

A zoom lens is like having many different lenses in one, from wide angle to telephoto. By adjusting the zoom lens, you choose the ideal perspective to match each part you take of the action or story.



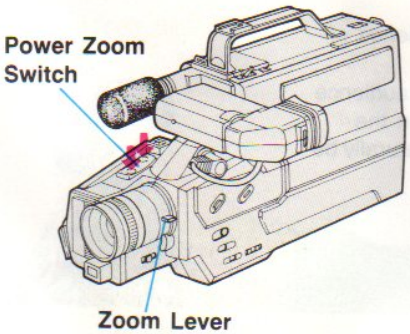


Take a look at the scenes above. Here the zoom lens is used to "trim" the total scene so that only the desired "take" is in the final recording.

Zoom-In Position

Zoom-Out Position

The depth of field, selecting what you will have in focus, depends on focal length. The zoom lens can be used to select a desired depth of field, because it varies focal length. For example, if you want your subject to be sharply outlined against a blurred background, then you would place the VHS Movie-Maker at a distance from the subject and set the lens for a telephoto image (Zoom-T Position).
On the other hand, if you want to see both the subject and the background clearly, then you would move closer to the subject and set the lens for a wide-angle shot, (Zoom-W Position).



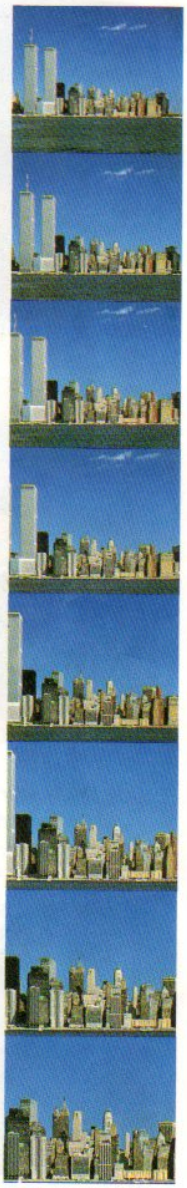
Follow Zoom

Even if your VHS Movie-Maker has a power zoom lens, there are some types of shots where manual adjustment will give a more interesting effect. The "follow zoom" is one example. As the subject moves toward you, zoom out (W) slowly so that the subject stays the same size in the picture. Therefore, the background changes although the subject does not seem to be getting closer to the viewer.

Slow and Flash Zoom Shots

If you zoom in very, very slowly on a distant scene, you will get a powerful effect that is quite different from normal speed zooming. In fact, this kind of very slow zoom image can give the same feeling as using a more powerful zoom lens.
Another case is the "flash zoom".
Here you zoom in as fast as possible, creating a dynamic tension in the picture.

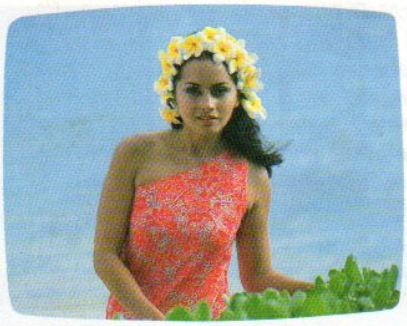
Follow Zoom



Slow Zoom

Flash Zoom

VHS MOVIE-MAKER ANGLES



High Level

The height and position of the VHS Movie-Maker in relation to the subject has a big influence on how the final picture will look. Keeping the VHS Movie-Maker at the subject's eye level creates the most "normal" or least distracting conventional impression. If the person is standing, then you hold the VHS Movie-Maker at the same level as their eyes. If the person is sitting down, hold the VHS Movie-Maker lower so it is still at eye level.
Similarly, you would lower the VHS Movie-Maker to match the height of a child, or a pet. Although "eye level" gives the most natural coverage of a subject's actions, there are many other possibilities. If you are recording from above eye level, then it is called a "high-angle" shot. If you are recording upwards from below eye level, then it is a "low-angle" shot.

Mid-High Level

Mid-Low Level

Low Level

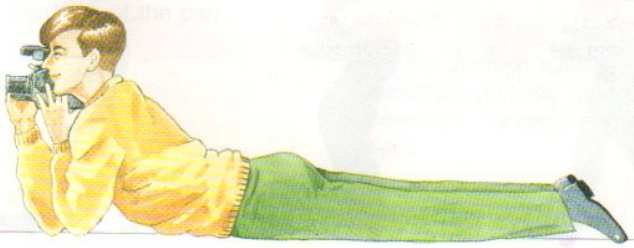
Camera angle informs the audience of their position.
The most natural position of the audience is at "eye level", at this position the audience's attention will most naturally be drawn to your subject.

Looking Up to a Subject

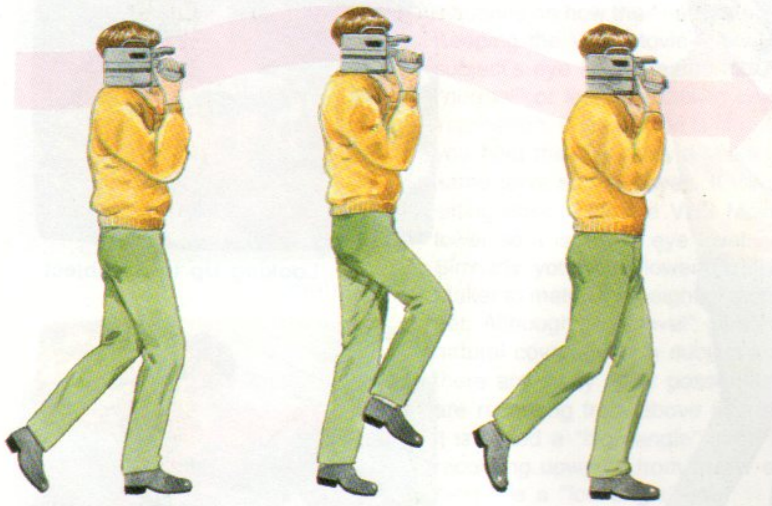
Looking Down to a Subject

Using an extreme low angle shot, you effectively "look up to" the subject, creating a feeling of authority, power, or oppression. You can try this by putting the VHS Movie-Maker at nearly ground level and recording people, tall buildings, or cars racing along a road.

On the other hand, a high video camera angle is good for "cover shots" at the beginning of a scene when you want to orient the viewer or establish the situation. In this case, you would set the telephoto lens to the wide-angle position to cover the largest area. But how can you get a shot from above your own eye level? With the VHS Movie-Maker, you simply hold the VHS Movie-Maker above your head while watching the picture on the EVF (many small portable monitor TVs are also available). Or record from the upper floors of a nearby building.

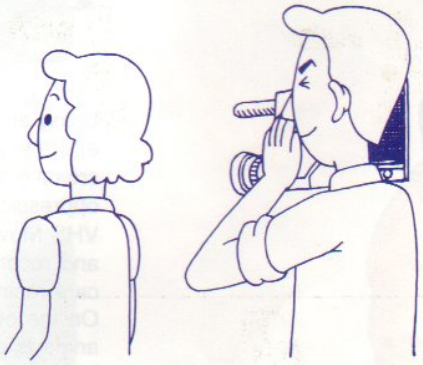


VHS MOVIE-MAKER MOVEMENT



Hand Held Movement of the VHS Movie-Maker is Difficult

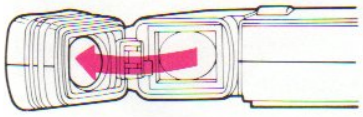
In the previous pages we have assumed that the VHS Movie-Maker was kept motionless. However, you will often want to move the VHS Movie-Maker, either to make the picture more interesting or to cover a moving subject. This is when you run into problems of picture instability. As your head bobs up and down, so will the picture. Professional cameramen keep a steady picture by walking with their legs bent, twisting their hips, and holding the VHS Movie-Maker parallel to the walking surface. But this takes a lot of practice. One way out is to move with the same rhythm as the subject so the viewer will not notice the unsteadiness.

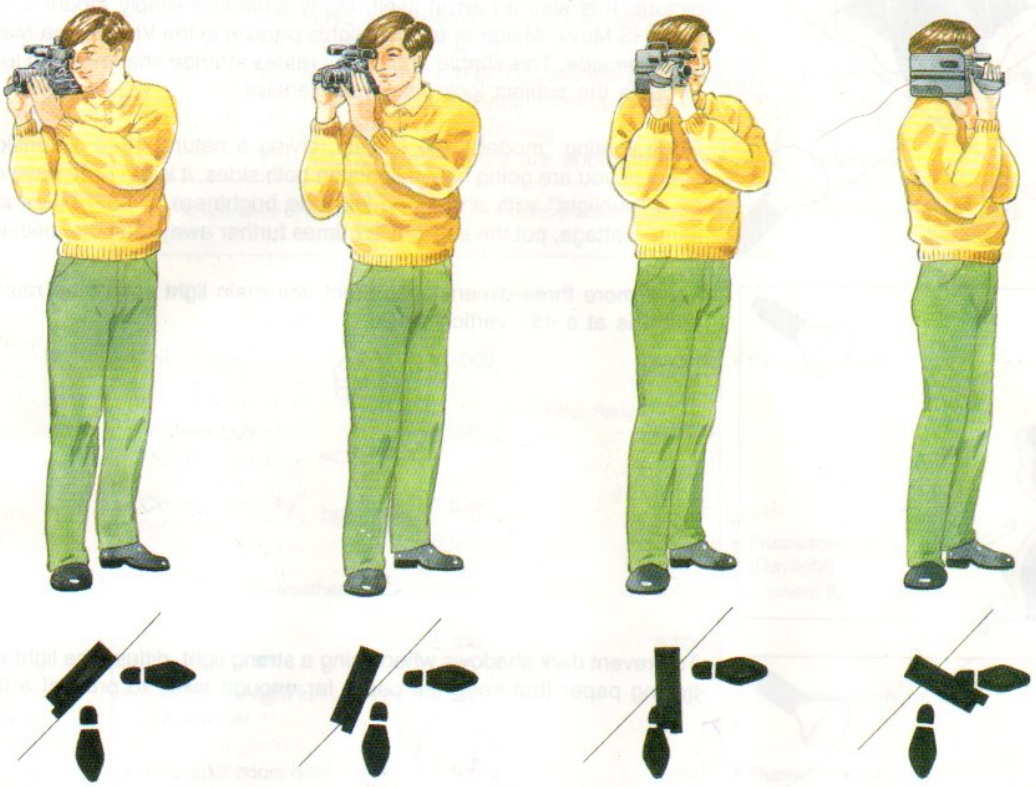


Here's a typical professional approach:

Start at subject's head, tilt down slowly toward the feet, pull away (Zoom-W), and then circle around. When done properly, this kind of continuous, moving shot will add a lot to an interesting subject.

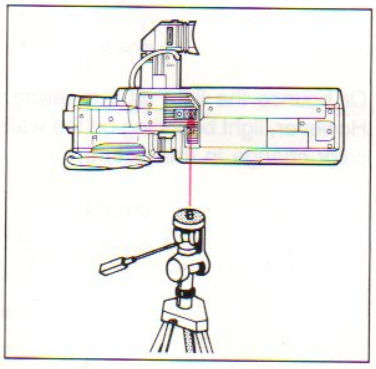
You can swing the eyepiece away from the EVF and hold the VHS Movie-Maker away from your body. Often the angle of the EVF can be changed for easy viewing when the VHS Movie-Maker is not at eye level.





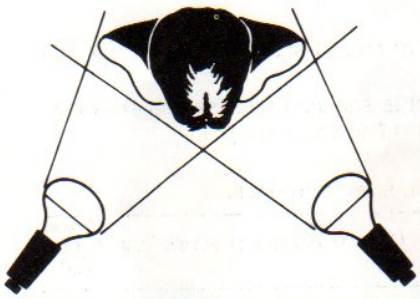
The Art of Panning

Panning is a pivotal movement of the VHS Movie-Maker from left to right or vice versa. You will often want to hold the shot for a few seconds after you finish panning. But If your body is twisted you can't hold the VHS Movie-Maker steady. To avoid this, stand so that the VHS Movie-Maker will be directly in front of you when you come to the end of the pan. In other words, you twist your body into position for the beginning of the pan.



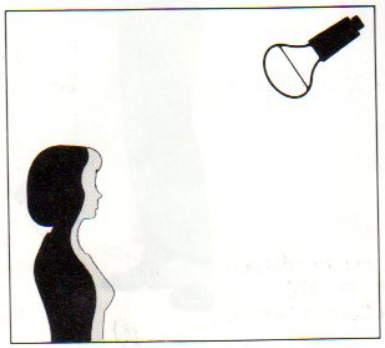
For the greatest stability and smoothest panning (and tilting) movement, we recommend using a tripod.

LIGHTING TECHNIQUE

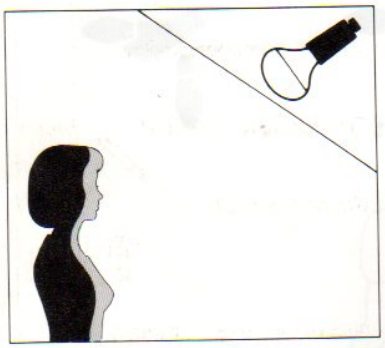


Lighting is often necessary to achieve sufficient brightness for a good picture. It is also an art in itself. Many amateurs simply mount a light on the VHS Movie-Maker or use two lights parallel to the VHS Movie-Maker on either side. This simple approach creates strange shadows and tends to make the subject look flat. (See diagram.)

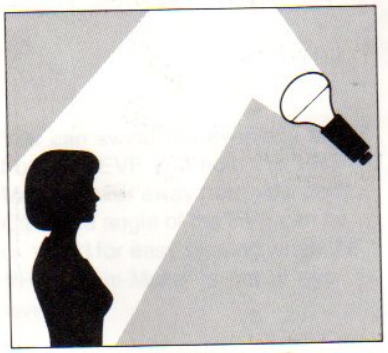
Good lighting "models" the subject, giving a natural three-dimensional effect. If you are going to use lights on both sides, it is better to have one as a "sublight" with about one-third the brightness. If both bulbs are the same wattage, put the sublight 1.7 times further away than the main light.



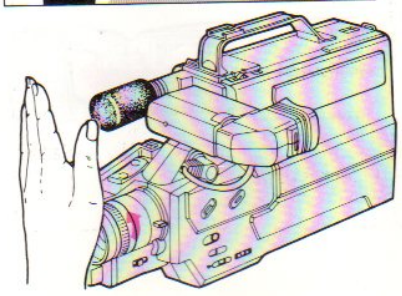
For a more three-dimensional effect, the main light should be raised so that it is at a 45° vertical angle.



To prevent dark shadows when using a strong light, diffuse the light with tracing paper (but keep the paper far enough away to prevent a fire).



Or bounce the light off the ceiling.
However, light bouncing off the walls or ceiling may cause an undesirable color change in the picture.



- Light filters extend your control of any lighting situation. The middle column of the color temperature chart on the next page indicates their general use.
You can substitute the VHS Movie-Maker Lens Hood with any standard or "special effect" photographic lens filter that is 46 mm in diameter.
TO REMOVE: Face the Lens, turn the Lens Hood to fully counterclockwise position. Cover the Lens Hood with the palm of your hand, lightly press and squeeze the Lens Hood Ring. Turn the Ring counterclockwise (facing lens).

TO PRODUCE THE BEST COLOR VIDEO PROGRAM

The VHS Movie-Maker has been designed for normal scene illumination of 150 footcandles (1500 lux.)
An illumination of 150 footcandles (1500 lux) is standard, but the camera may be used at F1.2, if illumination is more than 0.7 footcandles (7 lux).
Rough Values of Brightness
The figures in this table are approximate values for reference.

Color temperature of natural light	Color temperature unit: K	Color temperature of artificial light	Colors of light
• Fair, blue sky light	10,000	10,000 • Color television	Bluish
	Lens Filter Range		
• Slight cloudy sky light	8,000	8,000	
• Cloudy, rainy sky light	7,000	7,000	
	6,500	6,500 • Fluorescent lamp (Daylight)	
• Sunlight in fine-weather midday	6,000	6,000 • Camera flash bulb	
	5,500	5,500	
• Average sunlight in fine weather	5,000	5,000 • Blue lamp for photography	
• Sunlight 2 hours after sunrise and before sunset	4,500	4,500 • Fluorescent lamp (White)	Whitish
	FULL AUTO		
	4,000	4,000 • Normal flash bulb	
• Sunlight 1 hour after sunrise and before sunset			
	3,500	3,500 • Fluorescent lamp (Off-white)	
		• Tungsten lamp for photography	
• Sunlight 40 min. after sunrise and before sunset	3,200	3,200 • Halogen lamp	
	3,000	3,000	
Sunrise Sunset	2,800 Lens Filter Range	2,800 • Iodine lamp • Tungsten lamp	Yello-wish
	2,500	2,500	
• Sunlight 30 min. after sunrise and before sunset		• Acetylene lamp	
• Sunlight 20 min. after sunrise and before sunset		• Kerosene lamp	
	2,000	2,000 • Candlelight	Reddish

A WORD ABOUT THE CASSETTE

With the VHS Movie-Maker you can now use standard VHS Video Cassettes that can also be used by any VHS standard Video Cassette Recorder.

TYPES OF VIDEO CASSETTE

Use types with the VHS mark in this unit.

MAXIMUM RECORD/ PLAYBACK TIME		
T-160	T-120	T-60
2HRS. 40MIN.	2HRS.	1HR.

NOTES FOR VIDEO CASSETTE USE

Video Cassettes and their tapes are made with high precision.
Be sure to observe the following points.

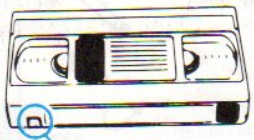
- Don't subject the tape to unnecessary movement.
- Don't insert and eject the video cassette over and over again, because this may result in tape looseness or scratches on the tape.
- Never try to disassemble the cassette or splice the tape.
- Don't open the cassette, touch the tape, or put anything inside the cassette.

VIDEO CASSETTE STORAGE

- Avoid places where humidity is high or where there is dust.
- Avoid places where there is magnetism (magnets, motors, transformers, speakers, etc.).
- Avoid dropping the cassette; don't subject it to intense shaking or vibration.
- Don't place cassettes in direct sunlight; keep them away from sources of heat.
- Store cassettes vertically.

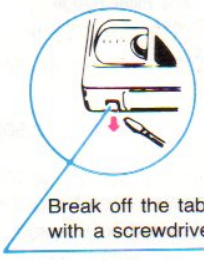
ACCIDENTAL ERASURE PREVENTION

- Accidental erasure of recorded material can be prevented by breaking off the tab on the rear of the cassette with a screwdriver or similar tool. This will cause the erasure prevention mechanism to function.
- If, for any reason, you later want to record on a cassette which has been protected as described above, recordings can be made by covering the hole (where the tab was) with cellophane tape.



Accidental Erasure Prevention Tab

• To prevent accidental erasure



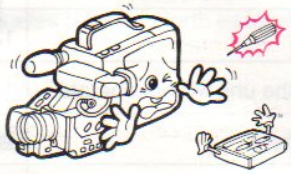
Break off the tab with a screwdriver

• To record again

Cover the hole with cellophane tape

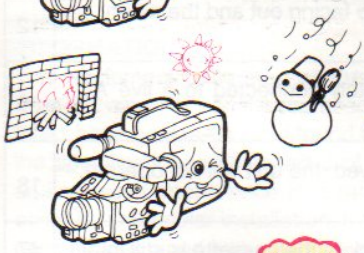
USE & LOCATION

- **To avoid shock hazard**
  The VHS Movie-Maker and power supply should not be exposed to rain or moisture.
  Do not connect the power supply or operate the VHS Movie-Maker if it gets wet.
  Your VHS Movie-Maker has been designed for outdoor use in all kinds of weather, however it will probably not survive any type of direct exposure to water, rain, sleet, snow, or a direct splashing from a pool or even a cup of coffee.
  Do not attempt to disassemble this unit. There are no user serviceable parts inside.
  Unplug the VHS Movie-Maker from the power supply before cleaning.

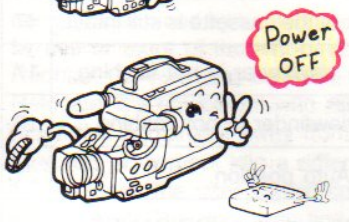


- **Do not aim the VHS Movie-Maker at the sun or other bright objects.**
  This action could permanently damage the pick-up device whether the VHS Movie-Maker is turned on or off.
  When the VHS Movie-Maker is aimed at a scene which contains an excessively bright object such as the sun or bright lighting, a vertical bar may appear in the picture. This is a characteristic of the CCD pick-up device and is normal when using the VHS Movie-Maker. Try to avoid aiming the camera directly at extremely bright object.

- **Do not leave the VHS Movie-Maker in direct sunlight.**
  When the viewfinder eyepiece is exposed to direct sunlight it works as a magnifying glass. The concentrated sunlight can cause damage to internal parts of the VHS Movie-Maker.

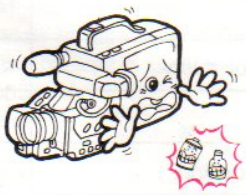


- **Avoid sudden changes in temperature**
  If the unit is suddenly moved from a cold place to a warm place, moisture may form on the tape and inside the unit. In this case, the DEW Indicator will flash on the EVF and the power will shut off automatically.



- **Do not leave the VHS Movie-Maker or the power supply turned on when not in use.**
- **Storage of your VHS Movie-Maker**
  Store and handle your VHS Movie-Maker in a manner that will not subject it to unnecessary movement (avoid shaking and striking). The VHS Movie-Maker contains a sensitive pick-up device which could be damaged by improper handling or storage.

CARE



- **To clean your VHS Movie-Maker**
  Do not use strong or abrasive detergents when cleaning the VHS Movie-Maker body.

- **To protect the lens**
  Always replace the lens cap on the VHS Movie-Maker lens when the VHS Movie-Maker is not in use.
  Do not touch the surface of the lens with your hand.
  Use a commercial VHS Movie-Maker lens solution and paper when cleaning the lens. Improper cleaning can scratch the lens coating.

BEFORE REQUESTING SERVICE

...Check the following points once again.

IMPORTANT NOTE: Periodic maintenance is required in order to maintain the unit's continued excellent performance. After a period of time the Video heads will require replacement. If cleaning or replacement of the Video heads is required, this service should only be performed by an authorized Video System Service Center. It is not recommended to use Head Cleaning Tapes.

Troubles	Corrections	Reference pages
No power ...	• Make sure the Power Supply is plugged in (if the Power Supply is being used).	26
	• Make sure the STANDBY Button has not been pressed ON.	14
	• Make sure the POWER Switch is ON.	13
	• Check the DEW Indicator. If it is displayed, the unit will not operate.	18
	• Be sure you are using a fully charged battery.	25
	• Make sure all necessary cables are connected correctly, and firmly.	27
	• Make sure the lens cap is OFF.	9
Video cassette can't be inserted ...	• Check that the Power Plug is completely connected to a live AC Outlet.	26
	• Insert the cassette with the window side facing out and the safety tab facing up.	12
Video cassette can't be removed ...	• Check that the Power Plug is completely connected to a live AC Outlet.	26
No operation starts when operation buttons are pressed ...	• Check the DEW Indicator. If it is displayed, the unit will not operate.	18
Recording does not operate ...	• Make sure that the small tab on the back of the cassette is still intact.	47
	• Make sure the Battery Indicator on the viewfinder is not flashing.	17
	• Make sure the DEW Indicator on the viewfinder is not flashing.	18
Auto Focus does not operate ...	• Make sure the Focus Switch is set to Auto position.	21
	• Make sure the VHS Movie-Maker is ON, with the VCR/CAMERA Selector Door in CAMERA position.	13
Focus is not sharp ...	• Make sure the surface of the lens is not dirty or dusty.	48
	• Make sure the lens is properly focused.	21,38
	• Make sure the Focus Switch is set to AUTO position.	21,38
The sound from microphone can't be monitored ...	• Make sure the VHS Movie-Maker is set to record or record/pause mode.	
Color picture is not satisfactory ...	• Check to be sure the color monitor TV is adjusted properly.	
Camera picture is too dark ...	• Make sure the High Speed Shutter Switch is off.	23

Troubles	Corrections	Reference pages
Rolling white pattern appears on screen ...	• This is a normal effect when the Tape Counter/Memory and Battery Display have not been cleared while in VCR mode, with the AC Adaptor in LINE position and the VIDEO IN terminal disconnected.	29, 30
There is no playback picture, or the playback picture is noisy or contains streaks ...	• Rotate the TRACKING CONTROL slowly in either direction.	15
During playback, the picture indicates motion or blurred action ...	• Portions of the still picture where the normal speed motion was particularly rapid may produce this effect. This is normal.	
If the top of your playback picture waves back and forth excessively ...	• Because the VHS Movie-Maker playback signal is not as stable as an off-the-air TV signal, you might experience the following symptom on your TV screen: "Top of TV screen is bent or unstable when a VHS Movie-Maker tape is played back. This symptom is more noticeable when a pre-recorded tape, recorded by another VCR, is played back." To solve this problem, locate the horizontal hold control on your TV. Turn it slowly to correct the wavy picture. If your TV does not have the horizontal hold control or adjusting the control does not help, some modifications have to be made to the TV set. Technically this is called "Horizontal AFC time constant change." If such a problem is noticed, please contact your local TV service center. (Some nominal service charges are required.)	

INFORMATION

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient the receiving antenna;

Relocate this equipment with respect to the receiver;

Move this equipment away from the receiver;

Plug this equipment into a different outlet so that this equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio-TV Interference problems".

This booklet is available from the US Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

WARRANTY

Limited Warranty

MAGNAVOX VHS Movie Maker

***90-Day Carry-In Service Labor Warranty**
***One (1) Year Exchange Warranty on Parts, Six (6) Months On Pick-Up Device**
This warranty gives you specific rights and you may also have other rights which vary from state to state.

What NAPCEC Will Do –

Parts & Labor During First 90 Days:
For Ninety (90) Days from the date of purchase, a Magnavox Authorized Service Center will repair any product defect and replace any defective part without charge to you for parts or labor.

Replacement Parts After 90 Days:
If within one (1) year after the date of purchase, six (6) months for a pick-up device, Magnavox will replace any defective part without charge for the part. New or rebuilt parts will be supplied and such parts will be warranted for the remainder of the product warranty period. After 90 days from the date of purchase, you must pay for all labor, transportation and service charges.

Who is Protected ... Where?
This warranty is extended to the original retail purchaser for products purchased and used in the U.S.A., Puerto Rico and the Virgin Islands. If you move within the U.S.A., a Magnavox Authorized Service Center in your area will honor this warranty for the remainder of the original warranty period.

What the Purchaser Must Do:
Before you call for service, check your operating instruction booklet. A slight adjustment of the customer controls discussed in your instruction booklet may save you a service call.

Important Reminder:
Please fill out and mail your Warranty Registration Card promptly. It will be easier for us to notify you if it should ever be required. The return of the Warranty Registration Card is not a condition to Warranty Coverage.

How To Get Warranty Service
Warranty service on your new VHS Movie Maker can be provided by Magnavox's "WE CARE" service program. For "WE CARE" warranty service, carefully pack the Movie Maker and deliver or ship it freight prepaid and insured to the nearest Magnavox Factory Service Center listed below, with evidence of the purchase date and description of the problem. Following warranty repair, the unit will be returned to you freight prepaid. Be sure you include your complete return address on the outside of the carton.

OR

You may also obtain warranty service by delivering the Movie Maker to a Magnavox Authorized VHS Camera Service Center together with evidence of purchase date and description of the problem. You must arrange pick-up following repair. Additional warranty service information may be obtained by contacting the dealer from whom the unit was purchased.

Warranty Exclusions

Your Warranty Does Not Cover: Labor charges for set installation or set-up, adjustment of customer or preference controls.

Product repair and/or part replacement because of misuse, accident, unauthorized repair or other cause not within the control of N.A.P. Consumer Electronics Corp.

Reception problems caused by signal conditions or cable or antenna systems outside the unit.

A Movie Maker purchased, used or serviced outside the U.S.A., Puerto Rico and Virgin Islands or used for commercial or institutional purposes (including but not limited to products used for rental purposes).

Incidental or consequential damages resulting from the product or use of the product. Some states do not allow the exclusion of incidental or consequential damages so the above exclusion may not apply to you. This includes, but is not limited to, pre-recorded material (copyright or non-copyright).

ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED IN DURATION TO THE DURATION OF THIS EXPRESS WARRANTY. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

Cassette Tapes
Magnavox recommends that you use only cassette tapes which have been tested and inspected for use in VHS recorders, and which are so labeled. Damage caused by the use of tapes other than those recommended may void the product warranty.

PRODUCT SERVICES OPERATION
N.A.P. CONSUMER ELECTRONICS CORP.
P.O.BOX 555
JEFFERSON CITY, TN 37760
(615) 475-3801

HOW TO GET WARRANTY SERVICE ON YOUR MAGNAVOX VHS MOVIE MAKER AFTER THE TWELVE MONTH WARRANTY EXPIRES

To obtain efficient and expedient "WE CARE" out-of-warranty service:

1. Contact the nearest Magnavox Factory Service Center listed below, to obtain the cost of out-of-warranty repair for your model product.
2. Pack your VHS Movie Maker in a suitable carton for safe shipment.
3. Mail the product to the nearest Magnavox Factory Service Center along with a letter inside the carton describing the problem. Be sure that the letter includes your name, address and telephone number. Enclose your check or money order in the amount quoted you by the Magnavox Factory Service Center.
4. When your product is received, it will be repaired in a manner that meets Magnavox's "WE CARE" high quality standards and returned to you by pre-paid transportation.

OR

Out-of-warranty service can also be obtained by delivering the VHS Movie Maker to a Magnavox Authorized Camera Service Center in your area.

MAGNAVOX PRODUCT SERVICES
NAPCEC FACTORY SERVICE CENTERS

1668 South Anderson, Compton, CA 90220 . . . (213) 637-7293
500 East Touhy Ave., Des Plaines, IL 60018 . . (312) 827-9405
3599 Meadow Lane, Cornwell Heights,
PA 19020 . . . . . (215) 638-7500
77 Grassmere Ave., West Hartford, CT 06110 . (203) 233-5151
116 Charlotte Ave., Hicksville, NY 11801 . . . . . (516) 933-1780
178 Manor Rd., East Rutherford, NJ 07073 . . . (201) 935-0600
41 Second Ave., Burlington, MA 01803 . . . . . (617) 272-4825
24090 Detroit Ave.-Rear, Westlake, OH 44145 . (216) 835-3500
1898 Leland Dr., Marietta, GA 30067 . . . . . (404) 952-3279

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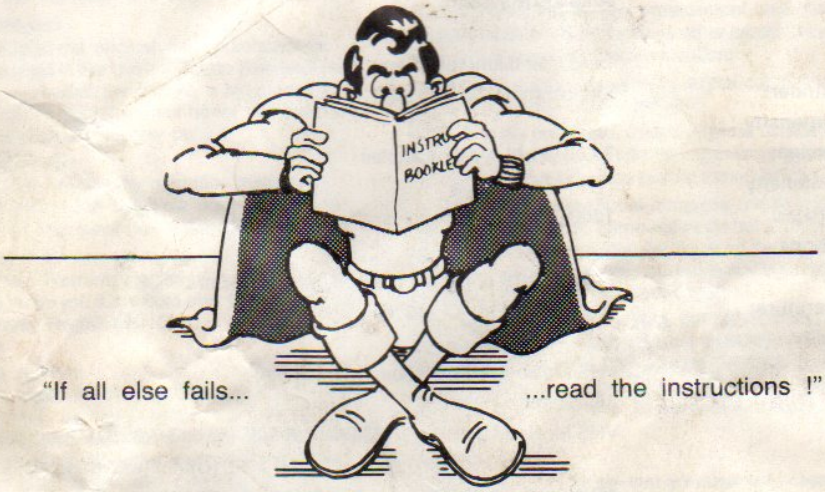
SPECIFICATIONS

VR9240AV01

Power Source:	VHS Movie-Maker: DC 12V AC Adaptor: 110/120/220/240V AC, 50/60 Hz
Power Consumption:	VHS Movie-Maker: 12V DC 11 W AC Adaptor: 40 W
Television System:	EIA Standard (525 lines, 60 fields) NTSC color signal
Video Recording System:	4 rotary heads, helical scanning system
Audio Track:	1 track
Tape Format:	Tape width 1/2 inch (12.7 mm), high density tape
Pick-Up System:	Sequential color difference, field reverse system
Pick-Up Device:	One integral color filter Charged Coupled Device (CCD)
Lens:	6:1 Zoom Lens. Auto iris: closed with power off. Auto Zoom Lens and Macro construction. Auto focus system. F: 1.2 f: 8.5mm – 51mm, Lens filter diameter: 46mm
Electronic Viewfinder:	Monochrome 2/3 inch CRT, built-in
Minimum Light Intensity on optical image:	7 Lux (F1.2) 0.7 footcandles
Optimum Light Intensity on optical image:	1500 Lux 150 footcandles
External Microphone Input Level:	–70 dB, 4.7K ohms unbalanced, M3 connector
Operating Temperature:	32°F~104°F (0°C~40°C)
Operating Humidity:	10%~75%
Weight:	VHS Movie-Maker: 5.1 lbs. (with handle) AC Adaptor: 1.9 lbs.
Dimensions:	VHS Movie-Maker: 14-9/16" (W) × 8-1/8" (H) × 3-7/8" (D) 370 (W) × 207 (H) × 98 (D)mm (with handle) AC Adaptor: 7-7/8" (W) × 1-7/16" (H) × 4-1/8" (D) 200 (W) × 36 (H) × 105 (D) mm

Weight and dimensions shown are approximate.
Designs and specifications are subject to change without notice.



"If all else fails... ...read the instructions !"

Printed in Japan
VQTS1365 Ⓐ

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